

CONTRACT AWARD		STATE OF ALASKA HQ, STATE EQUIPMENT FLEET (Contracting Authority) 2200 E. 42nd Avenue Anchorage, Alaska 99508 (907-269-0800)		CONTRACT AWARD NUMBER			
				1606468			
ORDERING DEPARTMENT HEADQUARTERS, STATE EQUIPMENT FLEET 2200 E. 42ND AVENUE ANCHORAGE, ALASKA 99508			COMMODITY CODE		DATE OF CONTRACT 2/20/06		
			NUMBER & PERIOD OF RENEWAL OPTIONS 3 YEAR		PR NO./DATE ASSIGNED		
			DATE INITIAL CONTRACT BEGINS 2/19/09		DATE INITIAL CONTRACT ENDS 2/20/06		
CONTRACTOR YUKON EQUIPMENT ADDRESS 2020 EAST THIRD AVENUE ANCHORAGE, AK 99501 CONTACT NAME ROGER MORRIS TELEPHONE NUMBER (907)277-1541			GS VENDOR CODE:				
			ISSUED IN ACCORDANCE WITH BID # SEF- 1055		DATED: 2/20/06		
			PRICE ADJ. REQ. PRIOR TO EACH RENEWAL:				
			CPI/PPI BASE INDEX POINTS & MO/YR:				
			REVIEW DATE:		RENEWALS EXPIRE (MO/YR):		
			ESTIMATED VALUE OF INITIAL TERM:		REBID:		
SEND INVOICES IN DUPLICATE TO: DOT&PF, STATE EQUIPMENT FLEET, 2200 E. 42ND AVENUE, ANCHORAGE AK 99508							
NOTE: This order constitutes a binding commitment between the State and the contractor listed hereon. Unauthorized modification without the expressed prior approval of the contracting authority will result in a financial obligation on the contractor and/or unauthorized State personnel making the change.							
DESCRIPTION 3-YEAR CONTRACT TO PURCHASE AIP TOW BEHIND BROOMS FOR ALASKA RURAL AIRPORTS CONTRACTING OFFICER: LYNDA SIMMONS (907)269-0788 TABLE OF CONTENTS SECTION I. STANDARD TERMS & CONDITIONS II. SPECIAL TERMS & CONDITIONS III. PRICE SCHEDULE IV. SPECIFICATIONS							
CONTRACTING AUTHORITY NAME & TITLE LYNDA SIMMONS, CONTRACTING OFFICER III				SIGNATURE			
TELEPHONE NO: 907-269-0793 FAX NO: 907-269-0801							
IMPORTANT 1. Contract award number and ordering department name must appear on all invoices and documents relating to this order. 2. The State is registered for tax free transactions under Chapter 32, IRS Code Registration No. 92-601185. Items are for the exclusive use of the State and not for resale.							

SECTION I

STANDARD TERMS AND CONDITIONS

- 1.0 ACCESSORIES:** When accessories are supplied, they must be certified to be compatible with the rest of the equipment. Certification will be written evidence satisfactory to the State that the accessories are compatible. The contractor's failure to supply this evidence within the time required by the State will cause the State to consider the bid non-responsive and reject the contract.
- 2.0 ALTERATIONS:** The contractor must obtain the written approval from the contracting officer prior to making any alterations to the specifications contained in this ITB. The State will not pay for alterations that are not approved in advance and in writing by the contracting officer.
- 3.0 AMENDMENTS:** Contract terms shall not be waived, altered, modified, supplemented or amended without prior written approval of the Contracting Officer.
- 4.0 ASSIGNMENT:** A contractor may not assign any portion of a contract unless authorized in advance and in writing by the Contracting Officer.
- 5.0 COMPLIANCE WITH ALL GOVERNMENT REGULATIONS:** The contractor must comply with all applicable federal, state, and borough regulations, codes, and laws, and pay all applicable federal, state, and borough taxes, and is liable for all required insurance, licenses, permits, and bonds. Failure to comply with such requirements shall constitute a breach of contract and shall be grounds for contract cancellation. Damages or costs resulting from noncompliance shall be the sole responsibility of the contractor.
- 6.0 CONFLICT OF INTEREST:** A person employed by the State of Alaska may not seek to acquire, be a party to, or possess a financial interest in, this contract if they are an employee of the administrative unit that supervises the award of this contract or they have the power to take or withhold official action to affect the contract.
- 7.0 CONTRACT PERIOD:** From the date of award for three years (36 months). There are no options to renew.
- 8.0 DEFAULT:** In case of contractor default, the State may procure the goods or services from another source and hold the contractor responsible for any resulting excess costs and may seek other remedies under law or equity. Alaska Statutes and Regulations provide for suspension and disbarment of non-responsible contractors.
- 9.0 DELIVERY:** All deliveries shall be F.O.B. final destination point with all transportation and handling charges paid by the contractor. Responsibility and liability for loss or damage shall remain with contractor until final inspection and acceptance when responsibility shall pass to the State except as to latent defects, fraud and contractor's warranty obligations.
- 10.0 DISCONTINUED ITEMS:** In the event an item is discontinued by the manufacturer during the life of the contract, another item may be substituted, provided that the Contracting Officer makes a written determination that it is equal or better than the discontinued item and provided that it is sold at the same price or less than the discontinued item.

- 11.0 DISPUTES:** Any disputes arising out of this solicitation shall be resolved under the laws of Alaska. An appeal or any original action to enforce any provision of this agreement must be in the superior court for the First Judicial District of Alaska.
- 12.0 FORCE MAJEURE (Impossibility to perform):** Neither party to this contract shall be held responsible for delay or default caused by acts of God and/or war, which is beyond that party's reasonable control. The State may terminate this contract upon written notice after determining such delay or default will reasonably prevent successful performance of the contract.
- 13.0 INDEMNIFICATION:** The contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the contractor under this agreement. The contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the contractor and the independent negligence of the contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the contracting agency's selection, administration, monitoring, or controlling of the contractor and in approving or accepting the contractor's work.
- 14.0 INSPECTIONS:** Goods furnished under this contract are subject to inspection and test by the State at times and places determined by the State. If the State finds goods furnished to be incomplete or not in compliance with bid specifications, the State may reject the goods and require the contractor to either correct them without charge or deliver them at a reduced price, which is equitable under the circumstances. If the contractor is unable or refuses to correct such goods within a time deemed reasonable by the State, the State may cancel the order in whole or in part. Nothing in this paragraph shall adversely affect the State's rights as buyer, including all remedies and rights granted by Alaska statutes.
- 15.0 INSURANCE:**

Without limiting the contractor's indemnification, it is agreed that the contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the Contracting Officer prior to beginning work and must provide for a 30-day prior notice of cancellation, non-renewal or material change of conditions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the contractor's services. All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21.

Proof of insurance is required for the following:

Workers' Compensation Insurance: The contractor shall provide and maintain, for all employees engaged in work under this contract, coverage

as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. The policy must waive subrogation against the State.

Commercial General Liability Insurance: covering all business premises and operations used by the contractor in the performance of services under this agreement with minimum coverage limits of \$300,000 combined single limit per occurrence.

Commercial Automobile Liability Insurance: covering all vehicles used by the contractor in the performance of services under this agreement with minimum coverage limits of \$300,000 combined single limit per occurrence.

Failure to supply satisfactory proof of insurance within the time required will cause the State to declare the contractor non-responsive and to reject the contract.

- 16.0 ITEM UPGRADES:** The State reserves the right to accept upgrades to models on the basic contract when the upgrades improve the way the equipment operates or improve the accuracy of the equipment. Such upgraded items must be at the same price as the items in the basic contract.
- 17.0 NEW EQUIPMENT:** Equipment offered must be new equipment. New equipment means equipment that is currently in production by the manufacturer and is still the latest model, edition or version generally offered. The equipment must be warranted as new by the manufacturer and may not have been used for any purpose, other than display (not demonstration), prior to its sale to the State. The State will not accept remanufactured, used or reconditioned equipment, including used or reconditioned components or parts of. It is the contractor's responsibility to ensure that each piece of equipment delivered to the State complies with this requirement. A contract's failure to comply with this requirement will cause the State to seek remedies under breach of contract.
- 18.0 PAYMENT:** Payment for agreements under \$500,000 for the undisputed purchase of goods or services provided to a State agency, will be made within 30 days of the receipt of a proper billing or the delivery of the goods or services to the location(s) specified in the agreement, whichever is later. A late payment is subject to 1.5% interest per month on the unpaid balance. Interest will not be paid if there is a dispute or if there is an agreement, which establishes a lower interest rate or precludes the charging of interest.
- 19.0 QUANTITIES:** The State reserves the right to reduce or increase the quantity of items ordered under this contract.
- 20.0 SEVERABILITY:** If any provision of this contract is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and provisions shall not be affected.
- 21.0 SHIPPING DAMAGE:** The State will not accept or pay for damaged goods. The contractor must file all claims against the carrier(s) for damages incurred to items in transit from the point of origin to the ultimate destination. The State will provide the contractor with written notice when damaged goods are received.
- 22.0 STANDARD AND SPECIAL TERMS AND CONDITIONS:** The terms and conditions of this section are standard to State of Alaska, Department of Transportation and Public Facilities, Statewide Equipment Fleet contracts for the purchase of goods. There may

also be other special terms and conditions in the Invitation to Bid or Request for Proposal which apply only to this contract. In the event of a conflict between the standard and special terms and conditions, the Special Terms and Conditions take precedence.

- 23.0 SUCCESSORS IN INTEREST:** This contract shall be binding upon successors and assigns.
- 24.0 SUITABLE MATERIALS:** All materials, supplies or equipment offered by a contractor shall be new, unused, of recent manufacture, and suitable for the manufacturer's intended purpose unless the specifications allow for used, rebuilt or remanufactured equipment.
- 25.0 TAXES:** Prices quoted in bids must be exclusive of federal, state, and local taxes. If the contractor believes that certain taxes are payable by the State, the contractor may list such taxes separately, directly below the bid price for the affected item. The State is exempt from Federal Excise Tax because articles purchased are for the exclusive use of the State of Alaska.
- 26.0 USE OF BRAND OR TRADE NAMES:** Brand or trade names used by the State in bid specifications are for the purpose of describing and establishing the standard of quality, performance and characteristics desired and are not a statement of preference nor are they intended to limit or restrict competition. Contractors may submit bids for substantially equivalent products to those designated unless the Invitation to Bid provides that a specific brand is necessary because of compatibility requirements. All such brand substitutions shall be subject to the State's approval.
- 27.0 WARRANTY:** Unless otherwise stated, all equipment shall be new and current model and shall carry full factory warranties. Contractor warrants all goods delivered to be free from defects in labor, material and manufacture and to be in compliance with bid specifications. All implied or expressed warranty provisions of the Uniform Commercial Code apply. All warranties shall be for and benefit the State.

SECTION II

SPECIAL TERMS AND CONDITIONS

1.0 DELIVERY:

- 1.1 **Pre-delivery service:** Prior to delivery, each vehicle, piece of equipment, or attachment shall be serviced and inspected by the dealer or his agent. A certification of this inspection must include the following (as applicable to the type of equipment):
 - 1.1.1 Dealer and vehicle identification
 - 1.1.2 Check-off of service and inspection performed including a list of all fluids including type weight and specification that are in the equipment as delivered for all fluid compartments.
 - 1.1.3 The vehicle's crankcase, differential and transmission, and other fluid compartments shall be filled to the manufacturer's recommended capacity.
 - 1.1.4 Fuel tank shall be filled to at least register a minimum ¼ full on the fuel gauge, unless restricted by the commercial carrier, when the vehicle arrives at the delivery location.
 - 1.1.5 The vehicle shall be clean and free from defects when delivered and should be ready for immediate and continued use upon delivery.
 - 1.1.6 Units delivered in an incomplete state, or that have deficiencies per the specification, are subject to the damage charges as noted in paragraph 4.0 below."
- 1.2 **Delivery Receipt:**
 - 1.2.1 A delivery receipt will be required for each unit delivered. This form will be supplied by the State Equipment Fleet prior to delivery. The receipt must be filled out by the contractor, and acknowledged by state receiving personnel by signature and date of actual receipt of equipment. One copy of this delivery receipt is to be given to the state-receiving agency. The original shall accompany the contractor's invoice to support and properly identify the vehicle delivered.
 - 1.2.2 Contractors are cautioned and advised that such delivery forms or other receiving type documents will not in any way be construed to mean the state has formally and fully accepted unit(s) referenced thereon as complete and meeting every specification set forth. Regional Equipment Managers are to be contacted regarding delivery coordination and contacts.
 - 1.2.3 Under no conditions will warranty documents be presented at time of delivery for signature. Only the Contracting Officer or designee may sign warranty documentation.

2.0 LINE SHEETS/BILL OF MATERIALS:

- 2.1 It is required within 30 days after delivery that the contractor provide a comprehensive listing of all components used to assemble the unit.
- 2.2 This includes any components installed by the manufacturer or any subcontractor or the contractor.
- 2.3 Information will include at a minimum, when available, make, model serial number on items such as engines, transmissions, axles, tires, bodies, plows, snow wings, belly blades, cranes, etc. The listings will be specific to each piece of equipment and will be provided on an individual CD for each unit delivered.
 - 2.3.1 On after-market items that are installed, part numbers with descriptions, such as, but not limited to hydraulic fittings, are to be provided.
- 2.4 A minimum of four (4) CD's per unit are to be provided and marked with the make, model, and last main numbers of the units serial number or State PO number.

3.0 F.O.B. POINT:

- 3.1 The F.O.B. point for all items purchased under this contract is the final destination anywhere within the State of Alaska. Ownership of and title to the ordered items remains with the contractor until the items have been delivered at their final destination and are accepted by the State.
- 3.2 The cost of shipping and delivery for orders beyond the limits of Seattle/Tacoma dock will be handled as follows. The contractor will prepay the shipping and delivery charges to any destination named by the State in its order. The contractor will charge-back those shipping and delivery charges to the State as a separate line item on the State's invoice.
- 3.3 All shipping charges over \$100 must be documented by a copy of the actual shipping invoice and received with the invoice charge to the State.

4.0 DAMAGES FOR LATE DELIVERY AND NON-CONFORMING GOODS:

- 4.1 Time is of the essence in this contract. The contractor is expected to deliver goods that conform in all material respects to the contract specifications on or before the date provided therein, as may be amended by written agreement of the parties.
- 4.2 In the event that the goods are delivered late or in the event that the goods do not conform in all material respects to the contract specifications, the State shall be entitled to offset against the contract price, as liquidated damages and not as a penalty, an amount equal to \$20.00 per day multiplied by the number of days elapsing between the delivery date provided in the specifications and the date that conforming goods are delivered to the State. The number of days for which liquidated damages shall apply shall include, in the case of non-conforming goods, the time reasonably necessary for the State to inspect the goods.
- 4.3 These liquidated damages represent a reasonable estimate of amounts necessary to compensate the State for loss of use of the goods during the period in which the goods would have been available to the State if conforming goods had been timely delivered.

5.0 WARRANTY: (Note: Language on warranty may vary from one item to another depending on the type of equipment and particular requirements of the contract.)

5.1 Standard Warranty Package: Unless otherwise stipulated by this contract, the contract will provide a five-year (60-month) warranty.

5.1.1 Full (100%) Parts and Labor Warranty Coverage of all components for 60 months (five-years), from the date the unit is placed in service. Warranty repairs shall take place at the vendor's authorized warranty service centers in Anchorage and/or Fairbanks. Contractors are required to have authorized warranty repair centers located in Anchorage and Fairbanks at a minimum. All travel costs for warranty performed outside of these areas will be billed as follows:

- 5.1.1.1 Travel Labor Charge: Travel labor will only be reimbursed for the time the employee is traveling from a warranty service center to the in-service location and return.
- 5.1.1.2 Mileage Charge, from the warranty service center to the in-service location.
- 5.1.1.3 Meals are paid at actual and charges must be accompanied by receipts and are not to exceed the State authorized \$42.00 per day.
- 5.1.1.4 Transportation, such as airfare, shall be reimbursed at actual and all charges are to be accompanied by a receipt/copy of the ticket.
- 5.1.1.5 Lodging shall be reimbursed at actual and shall not exceed \$100.00 per night unless no other lodging is available. Requests for reimbursement must be accompanied by a receipt.
- 5.1.1.6 Travel must be charged from the closest warranty service center to the in-service location unless otherwise approved by the Contract Administrator.

5.1.2 Full (100%) Warranty Coverage includes all cost of labor, parts, freight of parts or associated tools, transportation and travel in the Anchorage or Fairbanks areas (within a 10-mile radius), lubricants, miscellaneous cost, etc., to place the unit in like-new condition.

5.1.3 Should the manufacturer's standard warranty exceed the minimum State warranty requirements, the manufacturer's warranty will run in conjunction with and enhance the State's warranty, then continue for the remainder of its term.

5.2 General Warranty Requirements for all Equipment:

5.2.1 Warranty Exceptions:

- 5.2.1.1 For clarification, warranty does not apply to normal wear and tear or maintenance items, accident damages, misuse of equipment or failure to operate or maintain equipment as prescribed by vendor/manufacturer.

5.2.2 **Warranty on Attachments:**

- 5.2.2.1 Attachments and accessories are to have the same warranty coverage as the host with the exception of the VHF radio, which will be manufacturer's warranty.

5.2.3 **In-Service Date:**

- 5.2.3.1 Warranty on vehicles not placed in service immediately upon receipt because of time lag to construct body components and/or installation of special equipment, or due to seasonal usage or other delay, shall be warranted from the date the vehicle is placed in service. The receiving agency shall notify the vendor/manufacture in writing of the actual "in service" date. Notification of the requirement for delayed warranty will be provided on delivery orders whenever possible.

5.2.4 **Authorized Warranty Dealer (Contractor) and Subcontractor:** For the purpose of this contract, the contractor must meet the following applicable requirements:

5.2.4.1 Contractor must:

- 5.2.4.1.1 possess a current Alaska Motor Vehicle Dealer License pursuant to AS 08.66.010 through AS 08.66.090, when offering motor vehicles, trailers or semi-trailers, and;
- 5.2.4.1.2 be a manufacturer(s) authorized warranty service dealer for each unit, and;
- 5.2.4.1.3 have the capability to providing warranty servicing and repair work within the State of Alaska, with authorized warranty repair facilities in Anchorage and Fairbanks at a minimum.
- 5.2.4.2 Contractor, if appropriate, shall submit the name, address, Alaska business license of any subcontractor who will provide the warranty servicing and repair work referenced in paragraph 5.1 above. The Contractor must also provide contractual documentation or agreements with the subcontractor insuring the state that the subcontractor will provide complete contract performance on behalf of the contractor as set forth in this ITB and verification that the work provided will maintain manufacturer's warranty requirements.
- 5.2.4.3 Approval of all subcontractors must take place prior to bid opening date.
- 5.2.4.4 The use of a subcontractor does not exclude the provisions as noted in paragraphs 5.2.4.1, and subsequent paragraphs, as requirements to the contractor.

5.2.5 **Warranty Claims:**

- 5.2.5.1 Warranty will be provided at the unit's assigned (in-service) location as shown in this contract, Section III - Price Schedule. Because of the remote location of some equipment it is not always practical to deliver equipment to authorized warranty repair facilities. In these cases, the vendor may perform warranty work at the state's location or, the State of Alaska, at its discretion, reserves the right to perform the warranty work and be reimbursed by the vendor.
- 5.2.5.2 The State of Alaska has established a warranty procedure whereby the vendor is to be notified via letter, telex, fax, telegram, etc. that warranty work needs to be performed. If time is of the essence, a telephone call confirmed by one of the above written procedures may be utilized. The vendor must notify the state immediately that it will begin to perform the warranty work at the equipment location within 48 hours from receipt of written notification. The State may, at its discretion, proceed to make warranty repairs with its own work force in the case of emergency situation or to preclude excessive downtime (greater than 48 hours).
- 5.2.5.3 Failure to notify the State, that the vendor intends to begin to perform warranty work promptly under this paragraph, by the end of the business day following the states notification that work is required to be performed, is considered a contractual breach.

5.2.6 The vendor will be invoiced for required warranty work performed by the state. The shop rate to be charged for warranty work performed by the state will be **\$81.00** per hour. Labor hours to be charged will be in accordance with appropriate flat rate manuals. If flat rate manuals do not cover the labor operation, actual repair time will be used. Warranty work performed by state shop personnel at locations where no shop personnel are permanently stationed may be subject to travel expenses incurred involving those warranty repairs.

5.2.7 **Factory Recall:**

- 5.2.7.1 Nationwide factory recall or product update programs are the responsibility of the vendor and/or manufacturer. The State will attempt to bring affected equipment to an authorized repair facility. However, because of the remoteness of some equipment this is not always practicable or economical. In such cases, factory recall and modification work will be handled the same as warranty work. Factory recall notices sent to the state should, in addition to serial number, include model, year, and dealer from whom purchased.

5.2.8 Hazardous Material:

- 5.2.8.1 Due to concerns about liability resulting from hazardous materials being left at the work site on State of Alaska property, effective immediately no vendors will be allowed to use the State of Alaska rural airport facilities to perform warranty work unless they agree and sign a letter of intent stating that all waste products including oils, coolant and garbage will be removed from the work site. Vendors should note that in some village locations other suitable facilities might be available for rent from local residents or village authority.

6.0 REPAIR ORDERS AND DOCUMENTATION:

- 6.1 Any work performed by the contractor or approved subcontractor, whether warranty or any other work on a piece of equipment purchased under this contract, will require a copy of the repair order, any invoices showing parts and commodities including oils and types used.

7.0 PUBLICATIONS:

- 7.1 Publications, when ordered, for each unit ordered are to be received by the State of Alaska no later than 10 days after receipt of the unit. Custom manuals may be delivered no later than 90 days after receipt of the unit. Delivery will not be considered complete until the publications for each unit have been received by the State of Alaska. Note: Publications, when required, will be ordered on the same Purchase Order as the unit itself.

7.1.1 All manuals are to be pre-assembled in factory binders prior to delivery.

7.1.2 Separate pricing for a complete set of paper manuals as well as a CD version.

7.1.3 Refer to Section III – Price Schedule for required OPTIONAL pricing and to the individual specification.

7.2 Service Manuals:

7.2.1 Complete set(s) (compact disc or books) to include applicable information covering prime unit and attachments:

7.2.2 Body, chassis, and electrical

7.2.3 Engine, transmission, and differential(s) (service and rebuild)

7.2.4 Electrical and Vacuum troubleshooting

7.2.5 Wiring diagrams

7.2.6 Service specifications

7.2.7 Engine/emission diagnosis

7.3 Parts Manuals:

7.3.1 Complete set(s) (compact disc or paper books) to include prime unit and attachments, including updates. If updates are not provided during the

five-year warranty period, the State will order them from the manufacturer and bill the contractor for the full cost, including shipping.

7.3.2 Parts manuals are to be customized by serial number.

7.4 **Operator's Manuals:** Complete set(s) to include prime unit and attachments.

7.5 **Quantities:** As noted on Purchase Order.

7.6 **Manuals:** To be delivered to, and receipt signed by person(s) as noted on the Purchase Order.

7.7 **Service Bulletins, Etc.:** The contractor must provide appropriate service bulletins, technical support bulletins, service letters, product support bulletins, and/or any other information type notifications that are sent out to the vendor or used by the manufacturer in the maintenance and report of the vehicle, equipment or attachments being provided. The intent of this clause is that the State of Alaska be provided notification of any and all changes or improvements that may affect the maintenance, reliability, longevity, and safety of our equipment. This information will be provided as soon as possible to person(s) as noted on the Purchase Order.

8.0 STATEMENT OF ORIGIN: The contractor will furnish a Manufacturer's Statement of Origin for Automotive or Non-Automotive rolling stock for each unit. All such documents shall be forwarded to:

DOT&PF, HQ State Equipment Fleet
2200 E. 42nd Avenue Room #317
Anchorage, Alaska 99508

9.0 WEIGHT VERIFICATION SLIPS: If required in the Price Schedule, a weight scale ticket(s) of the completed unit(s) will be included with the Statement of Origin.

10.0 INSPECTIONS:

10.1 The State's inspection of all materials and equipment upon delivery is for the sole purpose of identification. Such inspection shall not be construed as final or as acceptance of the materials or equipment if materials or equipment do not conform to contract requirements. If there are any apparent defects in the materials or equipment at the time of delivery, the State will promptly notify the contractor thereof. Without limiting any other rights of the State, The State at its option, may require the contractor to:

10.1.1 Repair or replace at contractor's expense, any or all of the damaged goods,

10.1.2 refund the price of any or all of the damaged goods, or

10.1.3 accept the return of any or all of the damaged goods.

10.2 Costs of remedying all defects, indirect and consequential costs of correcting same, and/or removing or replacing any or all of the defective materials or equipment will be charged against the contractor.

11.0 PRICE:

- 11.1 **Price Guarantee:** The contractor is responsible to maintain prices under the contract firm for 180 days after bid opening. All price increases or decreases must remain firm for the following 180 days.
- 11.2 **NO RETROACTIVE PRICE INCREASES WILL BE ACCEPTED.**
- 11.3 Price adjustments, increases or decreases, for subsequent orders, may be made by providing the Contracting Officer satisfactory evidence that all of the following conditions exist:
 - 11.3.1 The increase is a result of the increased cost at the manufacturer's level and not costs under the contractor's control, and that;
 - 11.3.1.1 The increase will not produce a higher profit margin for the contractor than that on the original contract, and that;
 - 11.3.1.2 The increase affects only the item(s) that are clearly identified by the contractor.
 - 11.3.1.3 Satisfactory forms of the evidence of the above facts may include a certified invoice from the manufacturer, or an affidavit from an independent professional price-tracking firm that is recognized by the industry as reputable and knowledgeable. The contractor must be able to show the difference between the prior year's price and the current difference in the price being requested.
- 11.4 **Price Decreases:** During the period of the contract, the contractor must pass on to the state all price decreases, such as fleet rebates. A contractor's failure to adhere strictly and faithfully to this clause will be considered a material breach of contract. The state reserves the right to cancel the contract if the contractor fails to properly perform the duties set out herein.

12.0 COOPERATIVE PURCHASING:

- 12.1 All requests to cooperatively purchase, by qualified political subdivisions, from the resulting contract shall be approved by the Contracting Officer.
- 12.2 At no time may the contractor change the terms and conditions, alter the price to another entity, which differs from the contractual price, nor charge undisclosed administrative fees to allow cooperative purchasing.
- 12.3 The contractor shall charge, and subsequently reimburse to the State after receipt and payment by purchaser, a users fee of 2% or \$1,000.00, whichever is less, for each unit ordered by a qualifying political subdivision. Any administrative fee resulting to the Contractor in fulfillment of this requirement must be included in the bid price of the offered unit.

- 13.0 **MANUFACTURER'S REBATE (INCENTIVES):** In any circumstance during or prior to completion of the contract, whereupon the State of Alaska becomes eligible to receive a rebate for any vehicle purchased under this contract, it shall be the CONTRACTOR'S responsibility to inform the Contracting officer in writing and to advise the procedures for obtaining such rebates.

14.0 REPLACEMENT PARTS:

- 14.1 The State of Alaska shall expect the dealer or manufacturer to provide replacement wear parts to the State of Alaska's Fairbanks, Anchorage, or Juneau facilities within seven (7) days of order. All other parts must be available within ten (10) working days.
- 14.2 Back order procedures: Back orders are acceptable; however, the ordering shop shall be apprised at time of original orders as to the expected delay in delivery.
- 14.3 Warranty: All products supplied by the contractor shall be warranted against defects in materials and workmanship for a minimum of 90 days, commencing at the time of installation as long as the installation is within 12 months of purchase. The cost of any defective product and the labor required to replace the defective product shall be the obligation of the contractor.
 - 14.3.1 If the manufacturer's warranty exceeds the stated warranty then manufacturer's warranty supercedes.
 - 14.3.2 Parts Return: Within 12 months of purchase, the State is to be allowed to return new, parts with full refund, less shipping charges.
 - 14.3.3 Invoicing: Full description of item is required on all invoices, packing lists and billings.

15.0 BRAND NAME SPECIFICATION: For purposes of this contract, certain vehicle accessories are specifically identified by brand name and model/part number. Only the listed brand name and model/part numbers are acceptable. Substitutes shall be not allowed.

16.0 ADDITIONS OR DELETIONS: The State reserves the right to add or delete items, agencies or locations as determined to be in the best interest of the State. Added items, agencies or locations will be related to those on contract and will not represent a significant increase or decrease in size or scope of the contract. Such additions or deletions will be documented via mutual agreement, will be at prices consistent with the original bid price margins, and will be evidenced by issuance of a written contract change notice from the Contracting Officer.

17.0 CONTRACT ADMINISTRATION: The administration of this contract, including any/all changes, is the responsibility of the Contracting Officer, HQ State Equipment Fleet.

18.0 PROPRIETARY INFORMATION AND STATEMENTS OF CONFIDENTIALITY:

- 18.1 Except as set forth in this provision, all information in all bids will be made public under AS 36.30.530 not later than the time of issuance of a notice of intent to award.
- 18.2 If the offeror submits information considered by it to constitute a trade secret or proprietary data, such information may be expressly designated as such, and must be accompanied by the offeror's certification that (1) the information has consistently been maintained by its owner as a trade secret or as proprietary information, (2) the owner of the information has taken due care to protect it from release to non-privileged persons, and (3) to the best knowledge of the offeror, the information has not lost its status as trade secret or proprietary information,

whether by lack of diligent protection, release to any non-privileged person or otherwise.

- 18.3 **Absence of such certification, any claim of confidentiality will be ignored, and the contractor may not hold any reasonable expectation of confidentiality.**
- 18.4 Any information so certified will be held confidential so long as the contracting officer concurs that it constitutes a trade secret or proprietary data, and deems it not critical to determination of the price, quantity, or delivery terms bid, or the responsiveness of the bid.
- 18.5 By submission of a bid, the offeror consents to the contracting officer's exercise of reasonable judgment as to concurrence with any assertion of confidentiality, and waives any and all claims for release of information that the contracting officer reasonably deems not confidential notwithstanding a certified assertion of confidentiality.
- 18.6 A certified assertion of confidentiality in which the Contracting Officer concurs, with respect to information the Contracting Officer deems critical to determination of the price, quantity, or delivery terms bid, or the responsiveness of the bid, will cause the bid to be rejected as a non-responsive bid.

19.0 EQUIPMENT RELIABILITY:

- 19.1 Reliability of equipment is paramount importance to the State. It is the policy of SEF to require minimum levels of reliability from owned or leased equipment for it to be considered acceptable. Equipment offered for this bid must be capable of meeting the acceptable reliability standard stated below.
- 19.2 **Acceptable Reliability:** The state will monitor equipment reliability. Acceptable reliability for this contract is achieved when a machine achieves or maintains a Reliability Ratio (RR) equal to or exceeding the following:
 - 19.2.1 .90 (90 percent) RR during any consecutive 12-months (365 days) during the warranty period.
 - 19.2.2 .75 (75 percent) RR per operational month (recognizing operational as subject to weather and being defined by calendar days) during the consecutive 12-month period.
 - 19.2.3 RR below the stated percentages do not meet minimum reliability requirements for state owned equipment.
- 19.3 **Machine Failure and Downtime:**
 - 19.3.1 **Machine Failure** is any and all loss of capability to perform fully, as specified, which is not attributed to **Conditioned Failure**. Machine failure resulting in the unit being out of service is defined as **Downtime**.
 - 19.3.2 **Conditioned Failure** is any machine failure attributable to accident, operator abuse or other external cause not attributable to a defect in the machine itself.

- 19.3.3 **Downtime** is the actual number of days or fractions of days that the equipment is in a state of Machine Failure. Downtime does not count time used for scheduled maintenance (including preventative maintenance and scheduled major overhauls), time lost for repair maintenance and scheduled major overhauls), time lost for repair of damage as a result of operator abuse or machine misapplication; or time lost as result of accident or an act of God. Downtime includes:
- 19.3.3.1 Actual shop hours (and/or field repair hours) required to return unit to full operational status following machine failure, including trouble-shooting, repair, necessary replacement of parts, and necessary adjustments, plus
 - 19.3.3.2 Time lost waiting for parts and/or vendor assistance. "Waiting downtime" also applies if need for parts/assistance is discovered during routine maintenance and return to service is deemed counterproductive. In this case, "waiting time" clock begins with notice of need to vendor. Allowance may be considered in "waiting time" calculations if arrival of parts/assistance is delayed by transportation shutdown, to include verifiable transportation scheduling difficulties such as infrequent flights as long as all reasonable alternatives have been exhausted. Parts and assistance are to be provided by the quickest means reasonably possible to avoid unnecessary delays and downtime.
- 19.3.4 **Out of Service Report (OSR):** Down time resulting from machine failure is the actual number of hours a machine is out of service as recorded on the OSR or in the Equipment Maintenance Management System (EMS).
- 19.3.5 The state will record all downtime on an OSR or EMS work order, which will be originated for each occurrence of downtime. The document will show the date and time a unit went down, the location where the machine was abused, the reason the machine is down, date and time the vendor was notified (if applicable), the date and time the machine was returned to service, and the total hours of downtime.
- 19.3.5.1 The Contract Manager will finalize and approve the OSR or EMS work order. Both are available for contractor review.
- 19.3.6 **Reporting Downtime:** The Contracting Officer will maintain documentation of all Downtime, and shall send copies of such documentation to the contractor.
- 19.3.7 **Calculation of Reliability Ratio (RR):** RR is the mathematical ratio of operated time (uptime) to out of service time (downtime). The RR will be calculated according to the following formula:

$$RR = \frac{\text{Days in a Month} - \text{Days Out of Service}^1}{\text{Days in a Month}^2} = \frac{DM - DO}{DM}$$

Note: ¹**Fractional Days** apply, i.e., a unit is out of service 8 hours in a 24 hour period equals 1/3 or .33% of a day.

² **A day** is allocated as 24 consecutive hours from 12:00 AM to 12:00 AM.

Example: 30 days DM with 2 days, 8 hours DT would result in:

$$RR = \frac{30 - 2.33}{30} = .92$$

- 19.3.8 **Unacceptable Reliability:** If an item of equipment fails to perform at an acceptable level of reliability during the warranty period, the Contracting Officer will notify the contractor and request immediate remedy. Failure to remedy the piece of equipment within 30 days for failure will result in a breach of contract and the immediate return of the equipment and reimbursement of the guaranteed value (V) of the unit as follows:

Original cost of the unit less (-) Freight = \$_____ (V)

(V) Less (-) the cost of operation as listed in the Equipment Rental Rate Blue Book for the 2nd quarter, 2005 or comparable equipment or the current Federal Fixed Usage Rate for the Class for the State of Alaska, (a, b, or c, per hour) X the number of hours used = _____ (DV)

- a. Loader mounted snow blower = \$192.00 per hour
- b. All Carrier Units = \$270.00 per hour
- c. Broom, Tow Behind = \$360.00 per hour

Example: Cost of single unit, less freight = \$150,000. The hourly cost is \$150.00 per hour. The unit was used 150 hours prior to failing the acceptable reliability. The contractor guarantees the unit's worth at \$127,500.

- 19.3.9 Prior to return, the state will correct all reasonable cosmetic deficiencies (such as excessive rust) and those deficiencies that are directly related to damage due to accidents, misuse of equipment or failure to operate or maintain equipment as prescribed by vendor/manufacturer, prior to public auction.
- 19.3.10 The tires will be serviceable with at least 50% remaining tread.
- 19.3.11 Oil samples, as per manufacturer's service manual recommendations, will be taken by State of Alaska Maintenance on the engine, transmission, differentials and hydraulics.
- 19.3.12 In the case of dispute, at the expense of the State, a qualified agent from Northern Adjusters, Inc., or another professionally recognized appraiser, may be commissioned for an independent claim appraisal. Such appraisal shall be binding upon the State and contractor."

19.4 **BID BOND:**

- 19.4.1 The state will retain the bid guarantee of the contractor until the contractor has executed a contract and furnished a satisfactory performance bond. If the contractor fails to deliver the required performance bond within five working days after final award, the bid guarantee will be forfeited to the State of Alaska.

19.5 **PERFORMANCE BOND FOR WARRANTY & PERFORMANCE:**

- 19.5.1 The performance bond is due at the time of the first purchase order.
- 19.5.2 The state does not have backup equipment in many of its locations. Consequently, new-unit reliability and warranty performance is vital importance. To insure highest possible reliability and warranty service the State requires the contractor to post **performance security, in one of the forms listed below**, within 30 days of the first purchase order. The purpose of the posted performance deposit is to secure performance over the entire term of the contract. The performance security must cover any remaining warranty in the event that the contractor is unable to or otherwise fails to complete the five-year warranty period. The amount of the performance deposit will be **\$50,000.00**. Release of the performance security will be contingent solely upon the acceptable completion of the terms of the original contract.
- 19.5.3 The Performance Deposit must be posted for a **TWO YEAR TERM, AND THEREAFTER ANOTHER TWO YEAR, THEN ONE YEAR, FINANCIAL GUARANTEE SECURITY OR SURETY BOND SECURED BY A SURETY COMPANY AGREED TO BY THE PARTIES TO THIS CONTRACT WILL BE PROVIDED WITHIN 90 DAYS OF THE EXPIRATION OF THE FIRST SECURITY. Failure to post the successive bond, OR to provide an alternate security as listed below, will be cause for breach of contract and immediate cancellation of any future orders.** The performance deposit will be valid from the date the unit is delivered is placed into service at the assigned location.
- 19.5.4 **Performance Bond:** A performance bond must be written in a form satisfactory to the state by a company authorized to do surety business in Alaska. The performance bond must provide that it is payable to the State of Alaska as security for the contractor's full and faithful performance of the contract.
- 19.5.5 **Alternate Security:** In lieu of a performance bond, a contractor may post security in the form of a certified or cashier's check, or a certificate of deposit, to be returned to the contractor provided that the contractor fully and faithfully performs the contract, including all warranty obligations.
- 19.5.6 **Certified or Cashier's Check:** A certified or cashier's check, made payable to the State of Alaska.
- 19.5.7 **Certificate of Deposit:** A Certificate of Deposit (CD) made payable to the State of Alaska. Inclusion of other verbiage on the "payee" or "pay to" line will render the security unacceptable.

20.0 TRADE RESTRICTION CLAUSE (9 CFR Part 30.13FAA Order 5100.38)

- 20.1 The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:
 - 20.1.1 is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
 - 20.1.2 has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
 - 20.1.3 has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.
- 20.2 Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.
- 20.3 Further, the contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.
- 20.4 The contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide written notice to the contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.
- 20.5 This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.
- 20.6 Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

- 20.7 This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

21.0 CIVIL RIGHTS ACT OF 1964, TITLE VI – CONTRACTOR CONTRACTUAL REQUIREMENTS (49 CFR Part 21 AC 150/5100-15)

- 21.1 During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:
- 21.1.1 **Compliance with Regulations.** The contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.
- 21.1.2 **Nondiscrimination.** The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.
- 21.1.3 **Solicitations for Subcontracts, Including Procurements of Materials and Equipment.** In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.
- 21.1.4 **Information and Reports.** The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the sponsor or the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.

- 21.1.5 **Sanctions for Noncompliance.** In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to:
- 21.1.5.1 Withholding of payments to the contractor under the contract until the contractor complies, and/or
 - 21.1.5.2 Cancellation, termination, or suspension of the contract, in whole or in part.
- 21.1.6 **Incorporation of Provisions.** The contractor shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the sponsor or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

22.0 AIRPORT AND AIRWAY IMPROVEMENT ACT OF 1982, SECTION 520 - GENERAL CIVIL RIGHTS PROVISIONS (Airport and Airway Improvement Act of 1982, Section 520, Title 49 47123, AC 150/5100-15, Para. 10.c)

- 22.1 The contractor assures that it will comply with pertinent statutes, Executive orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance. This provision obligates the tenant/concessionaire/lessee or its transferee for the period during which Federal assistance is extended to the airport a program, except where Federal assistance is to provide, or is in the form of personal property or real property or interest therein or structures or improvements thereon. In these cases the provision obligates the party or any transferee for the longer of the following periods: (a) the period during which the property is used by the airport sponsor or any transferee for a purpose for which Federal assistance is extended, or for another purpose involving the provision of similar services or benefits or (b) the period during which the airport sponsor or any transferee retains ownership or possession of the property. In the case of contractors, this provision binds the contractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required of Title VI of the Civil Rights Act of 1964.

23.0 DISADVANTAGED BUSINESS ENTERPRISES (49 CFR Part 26)

- 23.1 **Contract Assurance (§26.13)** - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the recipient deems appropriate.
- 23.2 **Prompt Payment (§26.29)** - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than **30** days from the receipt of each payment the prime contractor receives from the State of Alaska. The prime contractor agrees further to return retainage payments to each subcontractor within [specify the same number as above] days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Contracting Officer This clause applies to both DBE and non-DBE subcontractors.

24.0 LOBBYING AND INFLUENCING FEDERAL EMPLOYEES (49 CFR Part 20, Appendix A)

- 24.1 No Federal appropriated funds shall be paid, by or on behalf of the contractor, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the making of any Federal grant and the amendment or modification of any Federal grant.
- 24.2 If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any Federal grant, the contractor shall complete and submit Standard Form-LLL, "Disclosure of Lobby Activities," in accordance with its instructions.

25.0 ACCESS TO RECORDS AND REPORTS (49 CFR Part 18.36(i),FAA Order 5100.38)

- 25.1 The contractor shall maintain an acceptable cost accounting system. The contractor agrees to provide the Sponsor, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers, and records of the contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

26.0 ENERGY CONSERVATION REQUIREMENTS (49 CFR Part 18.36 & Public Law 94-163)

- 26.1 The contractor agrees to comply with mandatory standards and policies relating to energy efficiency that are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

27.0 BREACH OF CONTRACT TERMS (49 CFR Part 18.36)

- 27.1 Any violation or breach of terms of this contract on the part of the contractor or their subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

28.0 RIGHTS TO INVENTIONS (49 CFR Part 18.36(i)(8) & FAA Order 5100.38)

- 28.1 All rights to inventions and materials generated under this contract are subject to regulations issued by the FAA and the Sponsor of the Federal grant under which this contract is executed.

29.0 TRADE RESTRICTION CLAUSE (49 CFR Part 30.13 & FAA Order 5100.38)

- 29.1 The contractor or subcontractor, by submission of an offer and/or execution of a contract, certifies that it:
- 29.1.1 is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR);
 - 29.1.2 has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list, or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list;
 - 29.1.3 has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.
- 29.2 Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to a contractor or subcontractor who is unable to certify to the above. If the contractor knowingly procures or subcontracts for the supply of any product or service of a foreign country on said list for use on the project, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract at no cost to the Government.
- 29.3 Further, the contractor agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in each contract and in all lower tier subcontracts. The contractor may rely on the certification of a prospective subcontractor unless it has knowledge that the certification is erroneous.

- 29.4 The contractor shall provide immediate written notice to the sponsor if the contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The subcontractor agrees to provide written notice to the contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.
- 29.5 This certification is a material representation of fact upon which reliance was placed when making the award. If it is later determined that the contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration may direct through the Sponsor cancellation of the contract or subcontract for default at no cost to the Government.
- 29.6 Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- 29.7 This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code, Section 1001.

30.0 TERMINATION OF CONTRACT (49 CFR Part 18.36(i)(2) & FAA Order 5100.38)

- 30.1 The Sponsor may, by written notice, terminate this contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this contract, whether completed or in progress, delivered to the Sponsor.
- 30.2 If the termination is for the convenience of the Sponsor, an equitable adjustment in the contract price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.
- 30.3 If the termination is due to failure to fulfill the contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by contract or otherwise. In such case, the contractor shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
- 30.4 If, after notice of termination for failure to fulfill contract obligations, it is determined that the contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the contract price shall be made as provided in paragraph 2 of this clause.
- 30.5 The rights and remedies of the sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this contract.

31.0 CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION (49 CFR Part 29 & FAA Order 5100.38)

- 31.1 The contractor certifies, by acceptance of this contract, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. It further agrees by submitting this proposal that it will include this clause without modification in all lower tier transactions, solicitations, proposals, contracts, and subcontracts. Where the contractor or any lower tier participant is unable to certify to this statement, it shall attach an explanation to the solicitation/proposal.

32.0 CLEAN AIR AND WATER POLLUTION CONTROL (49 CFR Part 18.36(i)(12) & Section 306 of the Clean Air Act & Section 508 of the Clean Water Act)

- 32.1 Contractors and subcontractors agree:
- 32.1.1 That any facility to be used in the performance of the contract or subcontract or to benefit from the contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities;
 - 32.1.2 To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42 U.S.C. 1857 et seq. and Section 308 of the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 et seq. relating to inspection, monitoring, entry, reports, and information, as well as all other requirements specified in Section 114 and Section 308 of the Acts, respectively, and all other regulations and guidelines issued there under;
 - 32.1.3 That, as a condition for the award of this contract, the contractor or subcontractor will notify the awarding official of the receipt of any communication from the EPA indicating that a facility to be used for the performance of or benefit from the contract is under consideration to be listed on the EPA List of Violating Facilities;
 - 32.1.4 To include or cause to be included in any construction contract or subcontract which exceeds \$ 100,000 the aforementioned criteria and requirements.

33.0 BUY AMERICAN CERTIFICATE:

- 33.1 Except for those items listed by the offeror below or on a separate and clearly identified attachment to the bid/proposal, the contractor certifies that steel and each manufactured product, are produced in the United States, as defined in the clause Buy American - Steel and Manufactured Products for Construction Contracts) and that components of unknown origin are considered to have been produced or manufactured outside the United States.
- 33.2 Contractors may obtain from the owner a listing of articles, materials and supplies excepted from this provision.

<i>Product</i>	<i>Country of Origin</i>

34.0 BUY AMERICAN PREFERENCES (Section 9129 of the Aviation Safety and Capacity Expansion Act of 1990 & Title 49 U.S.C. Chapter 501)

- 34.1 The Aviation Safety and Capacity Expansion Act of 1990 provides that preference be given to steel and manufactured products produced in the United States when funds are expended pursuant to a grant issued under the Airport Improvement Program. The following terms apply:
- 34.1.1 Steel and manufactured products. As used in this clause, steel and manufactured products include (1) steel produced in the United States or (2) a manufactured product produced in the United States, if the cost of its components mined, produced or manufactured in the United States exceeds 60 percent of the cost of all its components and final assembly has taken place in the United States. Components of foreign origin of the same class or kind as the products referred to in subparagraphs b. (1) or (2) shall be treated as domestic.
 - 34.1.2 Components. As used in this clause, components means those articles, materials, and supplies incorporated directly into steel and manufactured products.
 - 34.1.3 Cost of Components. This means the costs for production of the components, exclusive of final assembly labor costs.
- 34.2 The contractor is required to assure that only domestic steel and manufactured products will be used by the contractor, subcontractors, material, men and suppliers in the performance of this contract, except those:
- 34.2.1 that the US Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, are not produced in

the United States in sufficient and reasonably available quantities and of a satisfactory quality;

34.2.2 that the US Department of Transportation has determined, under the Aviation Safety and Capacity Expansion Act of 1990, that domestic preference would be inconsistent with the public interest; or

34.2.3 that inclusion of domestic material will increase the cost of the overall project contract by more than 25 percent.

34.3 **For compliance with the above, the contractor provided the following information with their bid:**

34.3.1 Location and statement of final assembly:

34.3.1.1 Company Name: M-B Companies

Physical Address: 1200 Park Street

City, State & Zip Code: Chilton, WI 53014

Final assembly for the M-B Companies broom attachment consists of: gathering parts, the modification or assembly and/or; installation of OEM components and the; manufacture and installation of specialty parts, prep and paint of assembled unit; and final test and shipment to dealer or user.

34.4 **Percentage of U.S. Components: 60% or more**

Contractor's Affirmation of U.S. componentry:

U.S. manufactured Component:

Chassis, frame, drive train, cab, electrical, hydraulic components, controls, snow blower, broom, plow, etc.

SECTION III

PRICE SCHEDULE

LOT #3

Item #	Unit	Description	Total \$ Amount
3a	ea.	Towed Airport Runway Broom with 300 HP engine, 16 foot broom length, and air blower system. warranty as per Section II – Special Terms and Conditions. Per Specification #547-AIP, contained herein. (Below optional items are not included in pricing)	<u>\$170,460.00</u>
State Class #547			
Year, Make and Model Offered:		<u>2006 M-B 4616 TOWV 300HP W/Air</u>	
<u>OPTIONAL ITEMS:</u>			
3b	ea.	Optional (for 3a) – 470 HP Engine: (As per Spec Item 1.2)	<u>\$29,978.00</u>
3c	ea.	Optional (for 3a) – Rear Axle Steer System: (As per Spec Item 1.2)	<u>\$ 8,800.00</u>
3d	ea.	Optional (for 3a) – Air Brake System: (As per Spec Item 2.4.4)	<u>\$ 998.00</u>
3e	ea.	Optional (for 3a) - 18 Foot Broom Length: (As per Spec Item 8.1.4)	<u>\$ 2,090.00</u>
3f	ea.	Optional (for 3a) - 20 Foot Broom Length: (As per Spec Item 8.1.5)	<u>\$ 7,776.00</u>
3g	ea.	Optional (for 3a) – Snow Shed Hood: (As per Spec Item 8.7)	<u>\$ 4,140.00</u>
3h	ea.	Optional (for 3a) - Training in Anchorage: (As per Spec Item 12.0)	<u>\$ 3,993.00</u>
3i	ea.	Optional (for 3a) - Training in Fairbanks: (As per Spec Item 12.0)	<u>\$ 4,345.00</u>
3j	ea.	Optional (for 3a) - Training in Juneau: (As per Spec Item 12.0)	<u>\$ 4,345.00</u>
3k	ea.	Optional (for 3a) - Publications: (As per Spec Item 13.5)	<u>\$ 59.00</u>

Required Delivery: **Not later than 270 days ARO**
to dockside Seattle/Tacoma area.

Offered Delivered Time: **210** Days ARO.

NOTE: Final shipment to in-service locations as annotated on the Purchase or Delivery Orders will be arranged and pre-paid by the contractor. The actual cost will be invoiced as a separate line item on the invoice for full reimbursement by the State. Shipping arrangements will always be in the best interest of the State and any extraordinary costs or circumstances pre-approved by the Contracting Officer prior to shipment. Refer to Section II – Special Terms and Conditions, paragraph 3.0.

Weight Scale tickets, as per Spec Item 16.13 are to be provided.

TRAVEL COSTS (For warranty performed outside the Anchorage, Fairbanks, or Juneau area):
These costs will not be used for bid evaluation purposes.

Per Mile	<u>\$2.50</u>
Per Hour (travel labor)	<u>\$80.00</u>

ALSO: (NOT INCLUDED FOR BID EVALUATION PURPOSES)

LCD Display: **Broom LDC display included at no additional cost**

SECTION VI

SPECIFICATIONS

SPECIFICATION #547-AIP
Towed Airport Runway Broom
October 19, 2005

GENERAL SPECIFICATION:

It is the purpose of this specification to describe a new, and of the manufacturer's latest current model and design, heavy-duty towed airport runway broom equipped with a 16 foot in length x 46 inch diameter broom with a forced air blower system and self-contained diesel engine.

Besides the 16 foot unit, pricing is also required for optional 18 and 20 foot in length brooms (with the same 46 inch broom diameter).

The unit will also be required to be priced with a higher horsepower engine and higher torque at the broom.

Unit or similar unit bid must have been in production a minimum of four (4) years.

Unit to include all standard equipment and accessories as advertised in manufacturer's specification sheet of model offered, unless otherwise specified herein.

Unit may be towed by a motor grader or plow truck utilizing a pintle hitch system.

APPLICATION:

This equipment will be utilized in summer and winter operations at the assigned location. Unit is to be capable of completely removing up to 2½ (2.5) inches light snow (8 to 15 pounds per cubic foot) at speeds of 10 to 30 MPH with a 3-inch strike pattern. The unit is to be capable of sweeping slush (density of 40 pounds per cubic foot) at speeds of 10 to 30 MPH. The unit shall also be capable of sweeping thin deposits of dry sand, dust, water, or other light debris.

Unit will be subject to varying terrain and weather conditions to minus 40 degrees Fahrenheit.

DOCUMENTATION REQUIRED:

A basic manufacturer's product brochure(s) describing the unit is to be provided.

In addition, specifications marked with an asterisk (*) require supporting documentation, which indicates specifically what the bidder intends to supply in regard to said items and/or how specifications will be met. **In order to help prevent technical errors, following each asterisked is space that may be used to address all of the asterisked items. It is required that a letter of clarification or the space behind the asterisked items be used to supply the required information. You may use the area behind the asterisked item to refer to a product brochure, manufacturer's technical data sheet, or letter of clarification, which indicates specifically what you, the bidder, intend to supply in regard to said items and/or how specifications are met. Also refer to paragraphs 10 and 11 in Section I – Instructions to Bidders.**

TYPICAL UNIT:

MB COMPANY Model 4616-TOWV or 4618-TOWV or 4620-TOWV or *SWEEPSTER* equivalent, provided all of the following minimum specifications are met.

1.0 POWER TRAIN:

- 1.1 (*) Engine: *CATERPILLAR* 3126B turbocharged (or equivalent) diesel, water-cooled, 6-cylinder, four (4) cycle, 7.2 liter minimum displacement, electronically controlled, 300 SAE gross horsepower minimum, 887 pound foot torque minimum. Not to exceed 2,400 rpm.

Reference M-B Co. documentation and clarification letter in bid file.

- 1.1.1 (*) Engine and installation must meet current EPA requirements.

Reference M-B Co. documentation and clarification letter in bid file.

- 1.2 **Engine (Optional - Refer to Section III - Price Schedule):**

- 1.2.1 (*) *CATERPILLAR* C-13 turbocharged (or equivalent) diesel, water-cooled, 6-cylinder, four (4) cycle, 12.5 liter minimum displacement, electronically controlled, 470 SAE gross horsepower minimum, 1188 pound foot torque minimum. Not to exceed 2,100 rpm.

Reference documentation and clarification letter in bid file.

- 1.2.2 (*) Engine and installation must meet current EPA requirements.

Reference M-B Co. documentation and clarification letter in bid file.

- 1.3 To be equipped with electronic controls for fuel injection and engine management including an automatic shutdown system with manual override and an electrical connector for *CAT* diagnostic system, or equivalent.

- 1.4 Air Intake System:

- 1.4.1 Air Cleaner: To be dual dry element, heavy-duty.

- 1.4.2 Air filter restriction indicator with "tattletale" feature, located close to oil dipstick.

- 1.4.3 Air intake to be mounted underhood or in a location so as to not ingest snow, slush, or other debris. If the intake is outside, a pre-cleaner (*SURECO TURBO II, ENGINEAIR* or similar) is required.

- 1.5 Exhaust System:

- 1.5.1 Designed to prevent rain, snow, or slush from entering system.

- 1.5.2 To include heavy-duty muffler with rain cap on vertical exhaust.

- 1.5.3 Located or caged to protect operator from burns.

- 1.6 Cooling System:

- 1.6.1 Permanent type antifreeze, affording protection to minus 60 degrees Fahrenheit.

- 1.6.2 A coolant circulation bypass will be provided to allow coolant to circulate within the engine block while thermostat is closed.
- 1.6.3 Drain cock(s) will be provided a low point of radiator and/or engine block providing maximum drainage.
- 1.6.4 Radiator to be mounted securely on vibration dampening mounts or independent of engine mounting to eliminate vibration.
- 1.6.5 To include coolant sight glass, visible by ground personnel.
- 1.6.6 Clamps utilized on all coolant hoses, one (1) inch inside diameter or larger, are to be "Constant Torque" design, stainless steel. Some engine manufacturers may not allow changing of all clamps due to warranty.
- 1.6.7 To include engine manufacturer's certification (at no later than time of pilot inspection) that the engine will maintain, but not exceed, a continuous operating temperature, as an operational unit, with a wide range of ambient temperatures to as low as minus 40 degrees Fahrenheit.
- 1.7 Fuel System:
 - 1.7.1 Fuel filter to be spin on type.
 - 1.7.2 Fuel filter to be located in engine compartment with stainless steel braided fuel lines to pump, as per SAE J1402.
 - 1.7.3 To include ball valve(s) in system if necessary to prevent excessive fuel loss when changing filter(s).
- 1.8 Automatic Engine Shutdown System:
 - 1.8.1 For low engine oil pressure.
 - 1.8.2 For high engine coolant temperature.
 - 1.8.3 For loss of engine coolant.
 - 1.8.4 For hydraulic oil loss (air and broom systems, if applicable).
 - 1.8.5 Also refer to engine compartment "INSTRUMENTATION/GAUGES" later in this specification.
- 1.9 Engine oil filter, spin-on type, easily accessible.
- 1.10 Engine oil drain to be remotely located for easy access and include hose, 1/4-turn ball valve with cap or plug.
- 1.11 Starting Aids:
 - 1.11.1 Glow plug system or air intake ribbon type heater or automatic electronic single shot canister type. Ether single shot system to be KBI Dieselmatic or *TURNER* Quick Start.
 - 1.11.1.1 If automatic ether system:
 - 1.11.1.1.1 To be wired through engine start switch.
 - 1.11.1.1.2 To include an engine safety sensor switch.

- 1.11.1.1.3 If automatic ether system, to be installed in engine compartment and to have maximum protection from the elements.
- 1.11.2 Engine Coolant Block Heater: Immersion type, 120 volt AC, of highest wattage as provided by OEM engine manufacturer.
- 1.11.3 Engine oil pan heater, one (1) each, 300 watt, 110 volt AC, silicone pad heater bonded to oil pan, *BESCO*, *KAT'S*, *WATLO*, or equivalent.
- 1.12 Engine Enclosure:
 - 1.12.1 The fabricated sheet metal engine enclosure shall provide protection for the engine and its components including batteries, air cleaner elements, broom and engine controls, as a minimum.
 - 1.12.2 It shall be totally enclosed, including the bottom, to eliminate snow ingestion. Airflow through the enclosure must be controlled.
 - 1.12.3 To include large removable hinged doors on each side located for easy access to engine for servicing and repairs.
 - 1.12.4 The engine compartment shall include lighting, two (2) lights on each side minimum.
 - 1.12.5 If necessary, steps are to be provided for access.

2.0 CHASSIS:

2.1 Standard Design:

- 2.1.1 Basic three (3) wheel trailer type, with the single front wheel assembly being capable of rotating 360 degrees on its axis.
- 2.1.2 Front Wheel Assembly:
 - 2.1.2.1 Single, to include lunette eye hitch assembly to hook up to tow pin on motor grader or dump truck having a pin height of approximately 30 inches.
 - 2.1.2.1.1 Front tow bar to include lift assist.
 - 2.1.2.1.2 To include safety chains.
 - 2.1.2.2 (*) Provide information on axle rating and transport weight, with full fuel load, on front axle.

Reference M-B Co. clarification letter in bid file.

- 2.1.3 (*) Rear Axle: Rigid type with single or dual pneumatic tired wheels. Please provide information on axle rating and transport weight, with full fuel load, on rear axle. Reference M-B Co. clarification letter in bid file.
 - 2.1.3.1 Rear axle to include *STEMCO* low temp oil seals and hubcap.
- 2.2 **Single rear axle design with Steer System (Optional Item – See Section III - Price Schedule):**

- 2.2.1 Front hitch to include lunette eye hitch assembly to hook up to tow pin on motor grader or dump truck having a pin height of approximately 30 inches.
 - 2.2.1.1 (*) Provide information on axle rating and transport weight, with full fuel load, on pintle hitch.
Reference M-B Co. clarification letter in bid file.
- 2.2.2 (*) Rear Axle: Rigid type with single or dual pneumatic tired wheels. Please provide information on axle rating and transport weight, with full fuel load, on rear axle.
Reference M-B Co. clarification letter in bid file.
 - 2.2.2.1 Rear axle to include *STEMCO* low temp oil seals and hubcaps.
- 2.2.3 Broom Chassis Axle Steer System:
 - 2.2.3.1 Stand alone closed-loop hydraulic, push-pull, tractor trailer type axle steer system.
 - 2.2.3.2 Dual pintle hook drawbar connection with simple, easy quick disconnect.
 - 2.2.3.3 Provisions for charging, centering and disengaging.
 - 2.2.3.4 Adjustable height for various height towing vehicles.
 - 2.2.3.5 Hydraulic jack stand.
 - 2.2.3.6 18,000 pound standard truck axle and brakes for ease of service and parts availability.
 - 2.2.3.7 Brakes – see below.
- 2.3 Tires and Wheels:
 - 2.3.1 Tires, load rated, traction grip (highway tread is not acceptable).
 - 2.3.1.1 Single tired rear axle to be 12 ply rating minimum.
 - 2.3.1.2 Dual tired rear axle to be 10 ply rating minimum.
 - 2.3.2 Wheels to be heavy-duty.
 - 2.3.3 **SPARE:** To include mounted spare tire and wheel, shipped loose.
 - 2.3.4 All tires and wheels on unit are to be interchangeable.
- 2.4 Brakes:
 - 2.4.1 Rear axle to be electric.
 - 2.4.2 Wiring to run into remote control box.
 - 2.4.3 To include brake controller.
 - 2.4.4 **Air Brakes (In lieu of electric) (Optional Item –See Section III – Price Schedule):**

- 2.4.4.1 The air drum brakes (16.5 x 5 S-Cam) shall be controlled by the tow vehicle utilizing glad hand connections at the rear of the tow vehicle.
- 2.4.4.2 The unit shall also have ABS brakes, FMVSS 121 compliant for trailers.
- 2.4.4.3 Glad hand connections with chained protective covers (all metal) shall be supplied.
- 2.5 Splash Pan:
 - 2.5.1 To be equipped with a splash pan and or baffles to prevent wheel splash and blowing snow from entering the engine compartment from under the machine.
 - 2.5.2 Pan or baffles is not to allow accumulation of water.
- 2.6 Fenders: To be included for rear tires.
- 2.7 Mud Flaps: To be equipped with heavy-duty full width mud flaps aft of the rear axle.
- 2.8 Fuel Tank(s):
 - 2.8.1 (*) To include a total capacity (90 gallons minimum) sufficient to supply fuel to the engine while operating at rated intermittent governed speed for not less than nine (9) hours, shall be provided.
Reference M-B Co. clarification letter in bid file.
 - 2.8.2 When more than one (1) tank is furnished, means shall be provided to assure equalized fuel level in all tanks. Inadequately sized equalization lines shall not hamper fueling time.
 - 2.8.3 Fuel line(s) shall be securely fastened in place, installed to prevent strains, and protected by grommets where lines project through aperture(s) in metal.
- 2.9 Engine Housing:
 - 2.9.1 Engine to be enclosed in a fabricated sheet metal housing of weather resistant design.
 - 2.9.2 To include large doors on each side for easy access for servicing and repairs by ground maintenance personnel.
- 2.10 Broom Hitch:
 - 2.10.1 The broom hitch shall provide low friction, free flotation, shock absorbing, and weight transfer for the broom head (weight transfer, if required for proper functioning of the broom).
 - 2.10.2 The low friction, free flotation is required so that is independent of broom chassis for vibrations and bounce considerations and to accommodate surface irregularities.
 - 2.10.2.1 A parallel arm system with a minimum four (4) horizontal pins shall be used.

- 2.10.2.2 The arms shall be box construction for torsional stiffness with appropriate diameter pins on greaseable low friction bushings, pre-lubricated type (no metal on metal).
- 2.10.3 To maximize vehicle tractive effort, braking, steerability, and overall handling of the broom chassis, the broom chassis shall carry approximately 50 percent of the broom weight by utilizing a weight transfer system. (Other systems, which do not negatively affect the tractive effort, braking, steerability and overall handling of the broom chassis will also be acceptable.)
 - 2.10.3.1 A pair of hydraulic cylinders shall support the parallel arms of the hitch.
 - 2.10.3.2 Pressure in the hydraulic cylinders provides the lift necessary to transfer approximately 50 percent of the broom weight to the chassis.
 - 2.10.3.3 A control valve adjusts the oil in and out of the cylinders to provide the same weight transfer no matter what the surface irregularities.
 - 2.10.3.4 The vertical stroke of the cylinders and thus the hitch shall be 12 inches minimum.
- 2.10.4 ***If a weight transfer system is utilized:***
 - 2.10.4.1 The pair of hydraulic cylinders shall also “free float and dampen” the parallel arms of the hitch to minimize broom bounce at high vehicle speeds.
 - 2.10.4.2 The broom hitch must have hydraulic cylinders to provide an active shock absorbing system.

3.0 ELECTRICAL SYSTEM:

- 3.1 12-volt system.
- 3.2 Batteries:
 - 3.2.1 Three (3) each, group 31, 3000 minimum total CCA. Permanently sealed type.
 - 3.2.2 Battery housing to be sealed (to prevent build-up of snow, ice, sand, etc.) and include a removable cover.
- 3.3 Single or dual high ampere master electric switch(es) to cut off power source from battery to the ground (ground side if possible, positive if not) and remainder of electrical system, *COLE HERSEE* #284-02 or *POLLAK* #51-315.
- 3.4 Alternator: 140 amp minimum, *DELCO* or *LEECE NEVILLE*.
- 3.5 Circuits:
 - 3.5.1 Protected by circuit breakers opening at 50 percent of overload.
 - 3.5.2 Circuits to match type of volt or ampere system requirements.
- 3.6 Lighting:

- 3.6.1 System to be water proof and corrosion resistant.
- 3.6.2 Broom Work Lights:
 - 3.6.2.1 Two (2) each, halogen sealed beam, minimum 35 watt flood, adjustable, rubber mounted, lights installed on the main frame to illuminate the broom working area.
 - 3.6.2.2 These lights to face rearward and be located ahead of broom assembly.
- 3.6.3 Utility/Trouble Light:
 - 3.6.3.1 Portable with magnetic base, 12-volt, *J.W. SPEAKER* Model 860WF/894-12V, halogen flood.
 - 3.6.3.2 Minimum 12 foot coiled power cord length.
 - 3.6.3.3 To include cigarette lighter plug and receptacle. Receptacle to include weather resistant cap/plug.
 - 3.6.3.4 To include a weather resistant padded storage case/box in the engine housing, easily accessed.
- 3.6.4 Strobe Light:
 - 3.6.4.1 *WHELEN* S360D, amber color lens, installed above the highest point of the unit and shielded from view by the towing vehicle operator.
 - 3.6.4.2 To be separately switched from the rear control panel "OFF/HIGH/LOW".
- 3.6.5 Marker Lights:
 - 3.6.5.1 To be LED and corrosion resistant.
 - 3.6.5.2 Position light(s) at each end of the broom assembly, amber forward and red to the rear.
 - 3.6.5.3 A cluster of three (3) red located at top rear of engine compartment.
- 3.6.6 Engine compartment work lights (minimum of 4 lights, 2 on each upper inside of housing) providing adequate lighting for servicing of engine compartment components in total darkness.
- 3.7 Wiring:
 - 3.7.1 All wiring shall be color-coded or continuously numbered every 18 inches minimum.
 - 3.7.2 Located for maximum protection from snow and ice build-up, grease, oil, fuel, and heat from engine and components.
 - 3.7.3 Routing through structural members to be protected by grommets.
 - 3.7.4 To be secured by clips at intervals to prevent rubbing or chafing due to movement.

- 3.7.5 All applicable junction boxes, light housings, etc. to be constructed of corrosion proof material.
- 3.7.6 Outside of the cab wiring:
- 3.7.7 All connectors to be corrosion resistant and waterproof.
- 3.7.8 Spade and bullet connectors are not acceptable.
- 3.7.9 *THERMOSEAL* and *WEATHER-PACK* type connectors are acceptable.
- 3.7.10 Non-Factory Wiring:
 - 3.7.10.1 All dealer/vendor installed items, which require connecting into the vehicle's electrical system shall be done using an OEM factory modified wiring kit whenever possible. All non-factory wire connections (splices, connectors, etc.) shall be soldered and shrink tube insulated with adhesive/metable sealant, thick wall polyolefin shrink tubing (3M EPS-300 or equal). No non-factory crimp connections allowed. No cutting or splicing into the factory wiring harnesses allowed. All electrical connectors shall have dielectric grease applied to terminals to help reduce corrosion.
 - 3.7.10.2 All accessories (strobe lights, operator controls. Light bar, etc. shall be wired through a 12- volt DC constant duty solenoid and controlled by bus bar mounted and permanently labeled auto-resetting circuit breakers. The solenoid shall be wired to the key switch.
 - 3.7.10.3 All non-factory wiring shall be encased in a totally sealed wiring harness (no plastic split loom) to help prevent corrosion from magnesium chloride or urea. The wiring harness shall be well secured to the truck with neoprene aircraft stainless steel tubing clamps. Rubber grommets shall be used at all areas where the wiring passes through areas that could damage the wiring.

4.0 INSTRUMENTATION/GAUGES/CONTROLS:

- 4.1 All controls and control circuits to be designed to prevent damage to equipment if control is inadvertently activated out of normal operating sequence.
- 4.2 Engine compartment area to include the following instrumentation, gauges, and controls, minimum, in a moisture proof enclosure to allow maintenance personnel to check unit from ground level:
 - 1.1.1 Any and all gauges that show pressure, temperature, etc., are to be in U.S.A. measurements such as PSI, Fahrenheit, etc.
 - 1.1.2 Hour Meter: To include an *ENM* Model PT-12 LCD programmable engine hour meter, running engine activated. Meter is to be capable of displaying 99,999 hours.

ENM

Phone: 773-775-8400

- 4.2.1 Keyed engine start/stop switch. This switch is to supply power to all light switches, gauges, as a minimum.
- 4.2.2 Engine emergency stop switch, red in color.
- 4.2.3 Engine speed indicator, in RPM.
- 4.2.4 Engine oil pressure gauge.
- 4.2.5 Engine coolant temperature gauge.
- 4.2.6 Voltmeter gauge.
- 4.2.7 Hydraulic system temperature gauge.
- 4.2.8 Fuel level gauge.
- 4.2.9 Full broom functions including; rotation, angle (left/right), raise/lower, airport travel lift, and speed control (this can not be overridden by the remote control box).
- 4.2.10 Broom speed indicator, in RPM.
- 4.2.11 Full air blower functions including; on/off and nozzle function controls.
- 4.2.12 Hydraulic jack function (at hitch area), when ordered without front dolly wheel.
- 4.2.13 Broom work lights switch.
- 4.2.14 Engine compartment light(s) switch.
- 4.2.15 Indicator lights (red or yellow in color), minimum four (4) each, for automatic engine shutdown system (described earlier in this specification) indicating as to what the problem is (such as engine oil pressure, engine coolant temperature, engine coolant loss, or hydraulic oil loss). If electronic engine is used, single check engine light and stop engine light with diagnostic blink codes are acceptable.
- 4.2.16 Strobe Light "HIGH/OFF/LOW" switch.
- 4.3 Remote Control Box (Wired):
 - 4.3.1 All controls shall be located in cab mounted control boxes and be fully accessible to the operator.
 - 4.3.2 Electric over hydraulic controls shall provide for controlling all required brooming functions.
 - 4.3.3 (*) For mounting in tow vehicle cab to allow operator to monitor engine and operate broom from cab of tow vehicle with the following minimum gauges, indicators, and functions. (Supply drawing and/or photo of remote control box that will be provided):

Reference M-B Co. clarification letter, drawings and information sheet in bid file.

 - 4.3.3.1 Any and all gauges that show pressure, temperature, etc., are to be in U.S.A. measurements such as PSI, Fahrenheit, etc.

- 4.3.3.2 Engine start switch is not to be included.
- 4.3.3.3 Engine emergency stop switch, red in color.
- 4.3.3.4 Engine speed indicator, in RPM.
- 4.3.3.5 Engine oil pressure gauge.
- 4.3.3.6 Engine coolant temperature gauge.
- 4.3.3.7 Voltmeter gauge.
- 4.3.3.8 Hydraulic system temperature gauge.
- 4.3.3.9 Broom speed, RPM, control.
- 4.3.3.10 Broom speed indicator, in RPM.
- 4.3.3.11 Fuel level gauge.
- 4.3.3.12 Broom head joystick control.
- 4.3.4 Control Cables/Leads and Connections:
 - 4.3.4.1 The unit shall be supplied with the following cables and connections to allow the remote control box to be installed in the cab of a tow vehicle with the cable/lead running from the back of the tow vehicle to the runway broom unit:
 - 4.3.4.1.1 Remote control box to be equipped with a pigtail type cable with plug-in connector, approximately 96 inches in length.
 - 4.3.4.1.2 A connector (to accept the remote control box plug-in and the main cable/lead receptacle) shall be supplied for installation, by State personnel, as a permanent receptacle at the back of the tow vehicle. Both the inside and outside position to include protective moisture proof caps that are to have a chain or cable attached to prevent loss.
 - 4.3.4.1.3 The main cable/lead shall be 32 foot in length, without splices, to go between the tow vehicle cab and the runway broom unit. It will connect to the outside rear cab connector, as described above, and it will also have a connector at the point it makes contact with the runway broom at the dolly wheel area or at the front parking jack area. This is to allow for easy and quick replacement, in case of damage.
 - 4.3.4.1.3.1 The main cable shall incorporate a “break-away” in-line coupler system at the point where it makes contact with the runway broom unit. “Break-away” shall be allowed even at a 90 degree turn angle.

- 4.3.4.1.4 The cable/lead, with receptacle, running from the front of the runway broom unit to the rear control panel shall be enclosed in conduit or heavy casing for maximum protection.
- 4.3.4.1.5 Rear engine area control panel to include a receptacle to accept the remote control box pigtail, for testing purposes. This receptacle to include a protective moisture proof cap that has a chain or cable attached to prevent loss.
- 4.3.4.1.6 All cables/leads to be; flexible to minus 40 degrees Fahrenheit, properly sheathed, and moisture resistant.
- 4.3.4.1.7 All connectors to be quick disconnect type.
- 4.3.4.1.8 All connections, connectors, and receptacles to be corrosion and moisture resistant.
- 4.3.5 **SPARES (Control Box & Cable):**
 - 4.3.5.1 To include one (1) each, fully functional spare remote control box with pigtail and plug-in connector.
 - 4.3.5.2 To include one (1) each, spare 32 foot main cable/lead with connectors.
- 4.3.6 Control boxes to be moisture resistant enclosures.
- 4.4 All switches, gauges, and controls to be properly identified by engraved type identification or electronic.
 - 4.4.1 *DYMO* type tape labels are not acceptable.
 - 4.4.2 Stick-on type labels are not acceptable unless with OEM part numbers that are parts manual listed are acceptable.
- 4.5 All switches and controls to be properly lighted for day or night operation (a flexible cable night light type light is not acceptable).
- 4.6 All gauges to be back lighted type.
- 4.7 All switches, gauges, and controls for engine operation shall be shock mounted with easy accessibility to the wires and lines that operate said switches, gauges, and controls.

5.0 HYDRAULIC SYSTEM:

- 5.1 The hydraulic system will be used to power all broom functions including, but not limited to:
 - 5.1.1 Broom rotation.
 - 5.1.2 Broom angle, left and right.
 - 5.1.3 Broom raise and lower.
 - 5.1.4 Snow deflector, raise and lower.

- 5.1.5 Weight transfer system. (When equipped.)
- 5.1.6 Air blower fan rotation.
- 5.1.7 Air blower chutes, raise and lower.
- 5.1.8 Air blower chutes, left and right.
- 5.1.9 Hydraulic jack stand at hitch area, raise and lower. (If not equipped with the front dolly wheel.)
- 5.2 The hydraulic system shall conform to SAE J-931.
- 5.3 The hydraulic pump(s) of heavy-duty type (*BOSCH-REXROTH*, or *SAUER-DANFOSS* 90 Series type) directly mounted to the engine's gearbox having sufficient capacity to operate all hydraulic equipment specified herein under all operating conditions and speeds. Clutch or driveshaft installations between engine and pump are not acceptable.
 - 5.3.1 (*) All hydraulic pumps and motors are to be manufactured in the United States and include Alaska parts (in stock) and service availability.
Reference M-B clarification letter in bid file.
 - 5.3.2 The gearbox shall be a parallel shaft pump drive with precision gears including a dipstick for oil level measurement.
- 5.4 Reservoir Tank:
 - 5.4.1 (*) Capacity shall provide no less than 120 percent of the volume of oil required for operation of the hydrostatic system. On a closed circuit system requiring a main pump and a second or auxiliary pump to feed oil into the hydraulic system, the volume will be based on the second or auxiliary pump.
Reference M-B Co. clarification letter in bid file.
 - 5.4.2 To include a filler neck with removable strainer and chained cap.
 - 5.4.3 An air vent shall be incorporated in the filler cap (unless pressurized system).
 - 5.4.4 Filler and air vent to be located inside the engine compartment.
 - 5.4.5 To include manual dip stick type gauge or sight gauge.
 - 5.4.6 Drain to include 1/4-turn ball valve with cap or plug.
 - 5.4.7 To include cleanout access plate(s) on reservoir(s).
- 5.5 Hydraulic tubes, hoses and fittings used shall conform to SAE-J514, J516, J517 and J524. A minimum number of fittings, joints and connections shall be used to prevent excessive back pressure, vibration and leakage. Hydraulic lines shall be of sufficient size to permit free flow of hydraulic fluid at temperatures down to minus 40 degrees Fahrenheit.
- 5.6 Filters:
 - 5.6.1 All elements where applicable to be spin on type **or** *FAIREY ARLON* ATZ Series in-tank design.

- 5.6.2 If filters are located below tank oil level, they are to include shut-off ball valves (1/4-turn) in-line, if required, to prevent excessive oil loss when changing filters. Both, inlet and outlet sides, if necessary.
- 5.7 To include an electric over hydraulic system to raise and cradle the broom head in the event of engine failure. The switch or control for this function shall be located on the engine area control box.

6.0 WEIGHT TRANSFER SYSTEM (Not Required):

- 6.1 To increase traction to the carrier and reduce wear and tear on caster wheels, the carrier may be equipped with a weight transfer system, which, when set from the operator's position, automatically maintains minimum 60% (sixty-percent) of the blower head weight to the chassis.
- 6.2 This shall be accomplished hydraulically by sensing the system pressure and continually adjusting the pressure via electronically controlled hydraulic metering valves.

7.0 DRIVE TRAIN (BROOM):

- 7.1 Hydrostatic Transmission:
 - 7.1.1 To be independent of blower drive and designed so that broom and blower may be used together or independently of each other with separate "on/off" switches.
 - 7.1.2 To include a variable or hydrostatic pump and hydrostatic motors of sufficient size and output to meet all performance requirements.
 - 7.1.3 (*) Broom to be driven by two (2) hydraulic motors, connected directly to each end of broom core and be protected from damage if hitting objects or being struck by other equipment.

Reference M-B Co. clarification letter in bid file.

- 7.1.3.1 (*) Torque with 300 horsepower engine To provide broom with 2650 pound foot of torque (minimum) at 5075 PSI maximum working pressure. Bidder is to provide engineering hydraulic power calculations confirming the broom speed and available torque values with bid submitted. This includes sizes and specifications of all components from the engine to the broom shaft including specification sheets for the broom and air blower hydrostatic pumps and motors showing type, size, and manufacturer. Efficiency losses must also be accounted for. The calculations must be understandable, complete, logical, and in a mathematical order per SAE and the Fluid Power Society standard formulas and practices. The burden of proof is the responsibility of the bidder.

Reference M-B Co. engineering/hydraulic power calculations and specification sheets in bid file.

- 7.1.3.1.1 (*) When optional minimum 470 horsepower engine is being supplied, to provide broom with 4000 pound foot of torque (minimum) at 5075 PSI maximum

working pressure. Bidder is to provide engineering hydraulic power calculations confirming the broom speed and available torque values with bid submitted. This includes sizes and specifications of all components from the engine to the broom shaft including specification sheets for the broom and air blower hydrostatic pumps and motors showing type, size, and manufacturer. Efficiency losses must also be accounted for. The calculations must be understandable, complete, logical, and in a mathematical order per SAE and the Fluid Power Society standard formulas and practices. The burden of proof is the responsibility of the bidder. Reference M-B Co. clarification letter in bid file.

- 7.1.3.2 Mechanical drivelines, chain couplers, gearboxes, or drive belts, are not acceptable. (Exception is given to this bid on the 46 inch broom to a planetary reduction between the drive motor and the broom core).

7.2 Broom Speed:

- 7.2.1 To be electric over hydraulic, controlled by means of a remote control box.
- 7.2.2 Variable from zero (0) to minimum of 500 RPM.

8.0 BROOM SYSTEM:

8.1 Configuration:

- 8.1.1 Broom assembly to include manually adjustable broom hood/cover and hydraulically adjustable snow deflector.
- 8.1.2 Broom Diameter: 3'10" (46 inches), minimum.
- 8.1.3 Broom Length: 16 feet (192").
- 8.1.4 **Optional Broom Length (Refer to Section III – Price Schedule):**
 - 8.1.4.1 Broom Length 18 feet (216").
 - 8.1.4.2 Pricing to include spares, one (1) each, full set of poly and one (1) each, full set of wire shall be included (shipped loose, not mounted).
- 8.1.5 **Optional Broom Length (Refer to Section III – Price Schedule):**
 - 8.1.5.1 Broom Length 20 feet (240").
 - 8.1.5.2 Pricing to include spares, one (1) each, full set of poly and one (1) each, full set of wire shall be included (shipped loose, not mounted).
- 8.1.6 Brush(s) to be stacked wafer type or *SIB* poly fastened to a one (1) piece tubular *SIB* core.

- 8.1.6.1 Wafer style bristles shall be fastened in a radial wafer utilizing a neoprene liner to dissipate heat and cushion shock loads generated from sweeping.
 - 8.1.6.1.1 All wafers shall be a within 50 ounce-inches static balance and marked at the heavy location
- 8.1.6.2 Brush fill shall be mixed (50/50), alternating sections of polypropylene and steel wire.
 - 8.1.6.2.1 The poly bristles (8.0 pound) shall be 0.060 x 0.090 inch oval shape.
 - 8.1.6.2.2 The wire (10 pound) shall have an average diameter of 0.018 inch, galvanized or stainless steel.
 - 8.1.6.2.3 **SPARES:** One (1) each, full set of poly and one (1) each, full set of wire shall be included (shipped loose, not mounted).
- 8.1.6.3 If core(s) must be removed to replace brushes, bidder must supply means to assist in replacement of brushes.
 - 8.1.6.3.1 Two (2) each carts, with caster wheels, must be provided for each broom core section. No other special tools are to be required.
 - 8.1.6.3.2 **SPARES:** Additional, one (1) each, core(s) (left and right if applicable) are/is required.

8.2 Caster Wheels:

- 8.2.1 Single or dual wheel design.
 - 8.2.1.1 Dual wheel design must oscillate as well as swivel.
 - 8.2.1.2 On 20 foot brooms (when ordered), there shall be four (4) single tire caster assemblies.
- 8.2.2 Casters shall be of the full 360 degree revolving type with shimmy dampers as needed or incorporating swivel detent locks.
- 8.2.3 To be located behind the broom head and inside the sweeping path.
- 8.2.4 Hubs must be demountable with steel rims.
- 8.2.5 Tires:
 - 8.2.5.1 The radial pneumatic tires shall be 180/70R8 (16 Ply Rated).
 - 8.2.5.2 To include tubes.
- 8.2.6 **SPARES:** To include two (2) each additional, spare caster wheel assemblies (meaning totally assembled and ready to bolt-on to the anti-shimmy damper), which include the applicable; wheels with tires and tubes, bearings, axles, and hub assemblies. Mounting hardware, nuts, bolts, washers, etc. are to be included. To be shipped loose.

8.3 Broom Angling:

- 8.3.1 Broom assembly, while in sweep mode, to have a minimum swiveling angle of 30 degrees to the right and left, selectable from an operator's joystick.
 - 8.3.1.1 The swing shall be accomplished by means of dual swing arms, or dual pivot cylinders, with four (4) pivot points, which ensures the weight of the broom head remains approximately on the chassis centerline regardless of the position of the broom head.
 - 8.3.1.2 The broom pattern shall not vary more than one (1) inch end to end for the whole width of the broom.
- 8.3.2 The bearing mechanism shall allow frictionless motion through the swing and shall be accomplished utilizing four (4) vertical parallel shafts at least 2 ½ (2.5) inches in diameter at each end of both swing arms.
 - 8.3.2.1 The swing arms themselves shall be made from formed steel plate and machined steel tubing with greaseable low friction bushings, pre-lubricated type (not metal on metal).
 - 8.3.2.2 Leaning of the chassis in the direction of the broom swing is unacceptable due to chassis handling, turning or braking.

8.4 Broom Oscillation:

- 8.4.1 The broom oscillation shall provide true flotation left to right for the broom head so that it is independent of broom chassis to accommodated surface irregularities.
 - 8.4.1.1 It shall have at least eight (8) degrees (+4, -4) of free-floating oscillation from left to right.
 - 8.4.1.2 The ability of the broom head to oscillate shall be provided by means of a spherical bearing assembly.
 - 8.4.1.3 The broom head shall have approximately 10 inches of vertical motion at the casters independent of the chassis portion.

8.5 Broom Height Adjustment:

- 8.5.1 The broom head lift shall be achieved utilizing two (2) each hydraulic lift cylinders, one (1) on each end of the broom frame, controlled by the operator's joystick.
 - 8.5.1.1 The Lift cylinders shall be equipped with a counterbalance valve, which prevents the broom head from creeping down.
 - 8.5.1.2 The pivoting action shall have adequate stroke to achieve ground clearance during transport when not in use.
- 8.5.2 Linkage attached to the broom lift cylinders shall also provide the brush pattern adjustment mechanism.
 - 8.5.2.1 The linkage shall activate a limit switch, which controls the cylinders' valve limiting the down travel of the two (2) lift cylinders.

- 8.5.2.2 A thumbscrew shall adjust the linkage / limit switch relationship, thus allowing brush pattern adjustment.
- 8.5.2.3 A toggle switch for remote broom lift control and pattern confirmation shall also be provided.
- 8.5.2.4 A rubber latched, weatherproof control box housing the micro switch, linkage, thumbscrew, and toggle switch shall be located behind the broom head allowing easy, repeatable pattern adjustment from a standing position.
- 8.5.2.5 Returning to the operator's cab to confirm pattern adjustment is unacceptable.
- 8.5.2.6 For safety reasons the operator cannot be positioned under or near the broom head to make the pattern adjustment.
- 8.5.2.7 The brush pattern adjustment process shall be accomplished without the use of tools.
- 8.5.3 A hydraulic elevation mechanism shall provide adequate ground clearance for transport when not in use and appropriate down pressure to produce the most effective broom pattern.
 - 8.5.3.1 To be controlled by means of controls at the engine compartment area, or when connected, the remote control box.
- 8.5.4 To include an automatic, mechanical, electric, or hydraulic, adjustment that is capable of being lubed, to compensate for brush wear.
- 8.5.5 An easily accessible fine height adjustment shall be provided to compensate for brush wear. To include an automatic adjustment system.
- 8.6 Hood and Deflector:
 - 8.6.1 The hood shall be designed to prevent ice buildup during freezing slush removal operations at rated speeds.
 - 8.6.2 It shall provide the necessary quick access to the brush for replacement of bristles and for inspection.
 - 8.6.3 The minimum 10 gauge thickness sheet steel brush hood shall be securely bolted to brush frame, adjustable to within 1/4" (one-quarter inch) of the brush bristles.
 - 8.6.3.1 The hood is to include heavy-duty reinforcement and gusseting to help prevent metal fatigue cracking at hinge points, corners, and where the hydraulic cylinder rods are attached to the hood.
 - 8.6.4 The hood shall incorporate an adjustable snow stripper to prevent carry over and clogging in heavy snow conditions. If a screw type jack is used, it shall have a minimum capacity of 5,000 pounds. (MB Company's standard jack is acceptable).
 - 8.6.5 A snow deflector shall be mounted on the front of the brush hood, capable of changing the angle at which snow leaves the brush.

- 8.6.5.1 Two (2) hydraulic cylinders spaced appropriately along the length of the deflector shall adjust the angle of the deflector with respect to the scoop.
- 8.6.5.2 The deflector angle shall be controlled and adjusted from the operator's cab.
- 8.7 **Snow Shed Hood (*OPTIONAL – Refer to Section III –Price Schedule*).**
- 8.8 Broom Hitch:
 - 8.8.1 The broom hitch shall provide true flotation vertically for the broom head so that it is independent of broom chassis to accommodate surface irregularities.
 - 8.8.2 To reduce friction, thus independency, all bearing surfaces shall utilize greaseable low friction bushings. No steel on steel.
 - 8.8.3 Also refer to the chassis section of this specification for more information on the broom hitch.

9.0 FORCED AIR BLOWER SYSTEM:

- 9.1 (*) Capacity shall be minimum of 20,000 CFM (with minimum 240 MPH air velocity) or 17,300 CFM (with minimum 315 MPH air velocity) air volume rated at outlet side of blower.
Reference M-B Co. clarification letter and documentation in bid file.
- 9.2 Minimum air velocity rated at each outlet nozzle (with only one [1] outlet nozzle operating) to be minimum 240 MPH (with minimum 20,000 CFM) or 300 MPH (with minimum 17,300 CFM) measured at a distance of 12 inches from nozzle outlet exterior while broom is under load.
 - 9.2.1 (*) Velocity requirement must be certified by an independent test facility and submitted with bid. Tests must be done at outlet nozzle.
Reference M-B Co. documentation in bid file.
- 9.3 Air inlet shall include a bolt-on heavy-duty safety screen, maximum 1¼ (1.25) inch openings.
- 9.4 The blower nozzles control shall be directional, left, right, or off and interlocked with the broom head able to always blow in the direction of broom casting.
- 9.5 A system for raising the nozzles, minimum of seven inches, for travel shall be provided.
- 9.6 The blower shall be the centrifugal type with single or double outlet.
- 9.7 An operator controlled blower drive disconnect shall be installed to permit blowing with or without broom operation.

10.0 PERFORMANCE TESTING (BROOM):

- 10.1 Must be able to sweep at speeds up to 30 MPH with head angled 30 degrees minimum, with a strike pattern of 2-3 (two to three) inches.

- 10.2 With broom in working position, broom must satisfactorily function to speeds of 30 MPH while sweeping a minimum of one (1) inch of fresh snow with snow density of approximately 25 pounds per cubic foot.
- 10.3 The above requirements may be tested by the State prior to acceptance.

11.0 TRANSPORT WIDTH:

- 11.1 (*) 16'3" (195") maximum (for a 16 wide broom). 16' 1" transport width
- 11.2 (*) 17'10" (214") maximum (for a 18 wide broom). 17' 8" transport width
- 11.3 (*) 19'5" (233") maximum (for a 20 wide broom). 19' 4" transport width
- 11.4 To be accomplished by standard hydraulic functions from either control box.

12.0 TRAINING (*OPTIONAL –Refer to Section III –Price Schedule*):

- 12.1 Vendor shall provide a factory certified instructor(s) within 30 days of acceptance by the State. This (these) representative(s) shall be prepared and qualified to make all necessary adjustments to the unit and give instruction to the operators to assure correct operation of the unit when it is placed in service.
 - 12.1.1 Please give advance notice to the appropriate – State Equipment District Manager:
Dave Bryson, South Central, in Anchorage at phone #907-269-5935
Dee Linton, Southwestern, in Anchorage at phone #907-269-5971
Tom Victorino, North Central in Fairbanks at phone #907-451-2264
Bobby Pace, Northwestern, in Fairbanks at phone #907-451-5219
Ken McBride, Southeastern, in Juneau at phone #907-465-1792
- 12.2 Total of 16 hours at the location as noted in each individual Lot Item, Section III - Price Schedule.
 - 12.2.1 Travel labor will only be reimbursed for travel from Anchorage, Fairbanks, or Juneau to the 'Assigned Location' as per Section III – Price Schedule. Travel labor will only be reimbursed for the time the employee is traveling within Alaska.
 - 12.2.1.1 Mileage charge, as per Section III – Price Schedule, will only be reimburse for travel within Alaska.
 - 12.2.1.2 Meals are paid at actual and charges must be accompanied by receipts and are not to exceed the State authorized \$42.00 per day. Meals are only paid for time in Alaska.
 - 12.2.1.3 Transportation, such as airfare (coach), shall be reimbursed at actual and all charges are to be accompanied by a receipt/copy of the ticket. Transportation will only be paid for transportation within Alaska.
 - 12.2.1.4 Lodging shall be reimbursed at actual and shall not exceed \$100.00 per night unless no other lodging is available. Requests for reimbursement must be accompanied by a receipt. Lodging will only be paid for lodging within Alaska.

- 12.3 To include a minimum of eight (8) hours of operator training including the following, as a minimum applicable agenda:
 - 12.3.1 Operating procedures per operating manual.
 - 12.3.2 Break-in procedures.
 - 12.3.3 Equipment limitations.
 - 12.3.4 Operator maintenance.
 - 12.3.5 Before operations checks and lubrication.
 - 12.3.6 Safety.
 - 12.3.7 Cold weather operations.
 - 12.3.8 Jump starting.
 - 12.3.9 Welding on equipment.
 - 12.3.10 Towing or transporting equipment.
 - 12.3.11 Instruments and controls.
 - 12.3.12 Gauge interpretation.
 - 12.3.13 Equipment operation, Do's and Don'ts.
 - 12.3.14 Attachment operation, Do's and Don'ts.
- 12.4 To include a minimum of eight (8) hours of mechanics (Journeyman level) training including the following theory, trouble shooting, and test procedures for, as a minimum applicable agenda:
 - 12.4.1 Electronics.
 - 12.4.2 Electrical.
 - 12.4.3 Hydraulics.
 - 12.4.4 Air system.
 - 12.4.5 Drive train.
 - 12.4.6 Engine and transmission electronics.

13.0 MISCELLANEOUS:

- 13.1 Weight Scale Verification Slips:
 - 13.1.1 Required not later than time of delivery.
 - 13.1.2 Total operating weight with full fuel load.
 - 13.1.3 Weight on the broom's axle when hooked to host unit with broom in up position.
 - 13.1.4 Also refer to Section II – Special Terms and Conditions.
- 13.2 Paint:
 - 13.2.1 Lead free.
 - 13.2.2 Color to be manufacture's standard yellow.

- 13.2.3 To include sandblasting and three (3) mils of appropriate primer, including frame and wheels.
- 13.2.4 The inside of the engine housing is to be painted a gloss yellow or white.
- 13.3 Easy access to all maintenance components shall be provided for items such as air cleaners, batteries, radiator fill and drain, oil filters, oil drain (hydraulic and engine), generator, etc.
- 13.4 Winterization: Entire unit to be winterized to provide satisfactory performance in temperatures to minus 40 degrees Fahrenheit. Antifreeze to be of permanent type only providing protection to minus 60 degrees Fahrenheit.
- 13.5 Warranty: To be a five-year (60 month), full 100 percent, per Section II - Special Terms and Conditions.
 - 13.5.1 Attachments are to have the same warranty coverage as the host unit except the VHF radio, which will have manufacture's standard warranty.
- 13.6 **Publications (OPTIONAL –Refer to Section III – Price Schedule):**
 - 13.6.1 Contractor may be required to supply samples of parts and service manuals after bid opening.
 - 13.6.2 Refer to Section III – Special Terms and Conditions for further requirements.
- 13.7 Hydraulic tubes, hoses and fittings used shall conform to SAE J514, J516, J517 and J524. A minimum number of fittings, joints and connections shall be used to prevent excessive backpressure, vibration and leakage. Hydraulic lines shall be of sufficient size to permit free flow of hydraulic fluid at temperatures down to minus 40 degrees Fahrenheit.
 - 13.7.1 (*) A letter of certification/approval from the manufacturer of the hydrostatic drive system components for chassis and rotary head shall be included in the bid package.
Reference letter of certification from Sonsource in bid file.
- 13.8 Filters: All elements where applicable to be spin on type and be easily accessible.
- 13.9 Component Sourcing:
 - 13.9.1 Due to critical nature of vehicle mission and parts support, only current production componentry shall be supplied.
 - 13.9.2 (*) The bidder shall provide assurance that only unused, newly manufactured components are supplied. Reference clarification letter in bid file.
 - 13.9.3 (*) In the bid package, the bidder and/or vehicle manufacturer shall certify that the engine(s), automatic transmission(s), transfer case, and axles to be supplied will be newly manufactured and purchased directly from the original component manufacturer or their authorized OEM distributor.
Reference clarification letter in bid file.

- 13.9.4 Upon the request of the purchaser, the bidder shall provide copies of purchase orders and invoices properly dated after bid award to verify the source and newness of these components.
 - 13.9.5 Purchase orders and invoices shall reference the component manufacturer, manufacturer's model and/or part number, and the bidders and/or vehicle manufacturer's name and part number.
 - 13.9.6 In the event any of these components are manufactured by either the bidder or vehicle manufacturer, documentation shall be provided indicating manufacture date and chassis installation date by serial number.
 - 13.9.7 Failure to provide appropriate documentation of component Sourcing shall be considered cause for rejecting the delivered vehicle. The burden of proof shall lay with the bidder.
- 13.10 Manufacturer/supplier stability:
- 13.10.1 (*) In the interest of continued and reliable service, parts, and technical support, equipment suppliers shall provide, with the bid package, a users list of model being bid that have been delivered, as new, within the past two (2) years. This users list is to include the following current information on a minimum of five (5) units: Reference USER LIST in bid file.
 - 13.10.1.1 **No. 1 – Model and serial number.**
 - 13.10.1.2 No. 1.- Date delivered.
 - 13.10.1.3 No. 1 – Company, or agency name.
 - 13.10.1.4 No. 1 - Address.
 - 13.10.1.5 No. 1 - Contact name.
 - 13.10.1.6 No. 1 - Phone number.
 - 13.10.1.7 **No. 2 – Model and serial number.**
 - 13.10.1.8 No. 2.- Date delivered.
 - 13.10.1.9 No. 2 – Company, or agency name.
 - 13.10.1.10 No. 2 - Address.
 - 13.10.1.11 No. 2- Contact name.
 - 13.10.1.12 No. 2- Phone number.
 - 13.10.1.13 **No. 3– Model and serial number.**
 - 13.10.1.14 No. 3- Date delivered.
 - 13.10.1.15 No. 3– Company, or agency name.
 - 13.10.1.16 No. 3- Address.
 - 13.10.1.17 No. 3- Contact name.
 - 13.10.1.18 No. 3 Phone number.
 - 13.10.1.19 **No. 4– Model and serial number.**

- 13.10.1.20 No. 4- Date delivered.
- 13.10.1.21 No. 4- Company, or agency name.
- 13.10.1.22 No. 4- Address.
- 13.10.1.23 No. 4- Contact name.
- 13.10.1.24 No. 4- Phone number.
- 13.10.1.25 **No. 5- Model and serial number.**
- 13.10.1.26 No. 5- Date delivered.
- 13.10.1.27 No. 5- Company, or agency name.
- 13.10.1.28 No. 5- Address.
- 13.10.1.29 No. 5- Contact name.
- 13.10.1.30 No. 5- Phone number.
- 13.11 (*) The contractor is required to post a performance bond prior to award, per Section II - Special Terms and Conditions. Reference bid file.
- 13.12 (*) Have documentation provided in the bid package to verify such continuous business activity, such as location and contact lists, financial statements, and annual reports. Reference contact list and financial information in bid file.
- 13.13 Local Support:
 - 13.13.1 (*) Because of the critical nature of use for this equipment, service and technical support are considered an integral part of its purchase. Therefore, all bidders must be authorized dealers of the vehicle proposed, with service facilities in Anchorage and Fairbanks at a minimum. Reference information on Yukon Equipment in bid file.
 - 13.13.2 The local service facilities must be capable of servicing the entire unit including the chassis, and any auxiliary equipment provided thereon.
 - 13.13.3 (*) The bidder must include verification that the local maintenance facility and staff are factory trained to provide the service and technical support, and have experience on similar units. Reference letter from M-B Company in bid file.
 - 13.13.4 Prior to award, the State reserves the right to inspect the bidder's local maintenance facility and request documentation on training and experience.

14.0 INSPECTIONS:

- 14.1 Prior to shipment from the manufacturer's plant, representatives of the State will inspect the **completed unit** for conformance to specifications. The completed unit, component equipment, and accessories shall be inspected and/or tested by the **contractor** for compliance with specifications, **PRIOR** to the arrival of the State inspection team. The State reserves the right to appoint an independent inspector at the State's expense to periodically monitor the progression of the unit during the manufacturing process.

- 14.1.1 The successful bidder is to provide the State with a minimum 30 days notice prior to the pilot inspection.
- 14.2 Prior to the arrival of the State inspection team, **a completed pilot unit**, component equipment, and accessories shall be inspected and/or tested by the contractor for compliance with specifications.
- 14.3 The contractor shall provide full access to the State inspection team.
- 14.4 These inspections by the State shall be thorough and very critical, and will encompass a complete review of the specifications. Adequate time and technical personnel shall be made available to assist the State in these inspections.
- 14.5 The contractor (responsible sales rep) shall also be in attendance.
- 14.6 Inspection trip costs. Bidder will supply round trip coach ("Y") airfare (not supersaver), with open arrival and departure times, for two (2) inspectors to the manufacturer's facility. Both inspectors will depart from **ANCHORAGE**.
 - 14.6.1 Per diem for each of the two (2) inspectors shall be at a rate of US\$120.00 per day each. It is expected that there will be three (3) days (travel day, inspection day, and return travel day).
 - 14.6.2 The successful vendor shall assist by booking lodging reservations. Meals and lodging will be paid by the State inspectors.
 - 14.6.3 Arrange and provide all ground transportation necessary to conduct the inspection for the State inspection team.
- 14.7 While the State recognizes contractual responsibility in testing, the State reserves the exclusive right to reduce the number of inspectors when and if that action seems prudent. If the number of inspectors is reduced, the Contractor will return to the State all monies saved by that action within thirty (30) days following the actual inspection.
- 14.8 It shall be the responsibility of the State inspection team to technically inspect and test the unit for compliance with the specifications.
- 14.9 It shall be the responsibility of the Contracting Authority Representative to observe the inspection and test to assure compliance with the published terms, conditions, and specifications of the bid, and to mediate any disputes, which may arise between the contractor and the Department of Transportation's representatives.
- 14.10 **FINAL ACCEPTANCE REMINDER:** Final acceptance is at final destination; however, all major tests will be conducted at the contractor's place of business unless the State has reason to believe alterations or damages have taken place which may have changed the performance or design characteristics of the unit since the time of inspection at the contractor's location.
- 14.11 A final inspection of the unit will be conducted at FOB point to assure that the unit still meets specifications.
 - 14.11.1 Should the State determine that it is necessary to have the representative of the Contracting Authority attend the delivery inspection due to numerous specification discrepancies that were not corrected per the Pilot Inspection Report, or the vendor requests the representative of the

Contracting Authority to attend the delivery inspection, the vendor shall pay round trip coach airfare (not supersaver) from Anchorage to the assigned location and per diem at \$120.00 per day.